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ABSTRACT

Financial and educational trends in accredited public institutions of higher education were studied for the period 1976-79 with some data for earlier years and for 1979-80. The study was based on a stratified sample of 135 institutions of which 95 participated. The sample represented all parts of the public sector except autonomous professional schools. Primary sources of information were the enrollment, salaries, and finance sections of the Higher Education General Information Survey; other salary information; and an audited financial statement, a voluntary support survey, and a questionnaire filled out by college officials and faculty and student representatives. In an analysis of the condition of the public sector, attention is directed to consolidated trends for all institutions, comparative trends for different types of institutions, and estimates of the overall condition of each participating institution. Broad areas of analysis are as follows: enrollment and admissions, faculty and other staff, content and quality of educational program, operating revenues and expenditures, undergraduate student financial aid, and liabilities and net revenues. It is concluded that although times are difficult, public institutions have been able to operate so that educational programs have not been harmed seriously and retrenchment has not been severe. It is suggested that this basic stability has been achieved at the expense of physical, financial, and human capital and through changes in budgetry priorities, and that if trends of the last decade continue indefinitely, a time will come when educational performance will deteriorate. (SW)

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PRESERVING AMERICA'S INVESTMENT IN HUMAN CAPITAL

A Study of Public Higher Education, 1980

September 1980

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

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by

W. John Minter and Howard R. Bowen

American Association of Community and Junior Colleges

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National Association of State Universities and Land-Grant Colleges

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FOREWORD

We are pleased to introduce the first edition of "Financial and Educational Trends in Public Higher Education" by W. John Minter and Howard R. Bowen. This report represents the first comprehensive analysis of the three major components of public higher education: the public research universities, the state colleges and universities, and the community and junior colleges which together educate approximately four out of five of the nation's college students. This report parallels a series of similar reports on the financial condition of independent colleges and universities produced by the same authors. Thus, there now exists a comprehensive review of financial and educational trends affecting the entire spectrum of American higher education.

Beginning in 1978, the American Association of Community and Junior Colleges (AACJC), the American Association of State Colleges and Universities (AASCU), and the National Association of State Universities and Land-Grant Colleges (NASULGC), in cooperation with the National Association of Independent Colleges and Universities (NAICU), initiated efforts to obtain objective, systematic, and continuing bi-annual assessments of the financial and educational condition of public colleges and universities. As the Minter-Bowen studies of independent higher education best exemplified research of this type, we requested that the same authors undertake the study of public sector institutions.

Financial assistance for the first four years of the study was generously provided in 1979 by the Ford Foundation and the Exxon Education Foundation; and we owe a special debt of gratitude to Dr. Fred Crossland (Ford) and Dr. Walter Kenworthy (Exxon) for their participation and sound advice. Their support, together with the willing cooperation of 95 public colleges and universities, enable the authors to select a statistically representative panel of institutions to join the study and to respond to ongoing surveys and information requests without monetary compensation.

This report is particularly timely in light of the challenges immediately facing both public and independent higher education: maintaining and improving institutional quality at a time when national and state economies are of uncertain strength; and adapting to the possibility of a changing enrollment mix. The report reflects the state of public higher education's resources, a perspective which must be used in viewing the major challenges in order to develop institutional priorities and capabilities needed for American society during the last two decades of the twentieth century.

It is expected that this report will provide information which accurately represents the financial health of the full spectrum of American higher education, and therefore will be of critical use to public and educational policymakers. Furthermore, it is expected that this information will be maintained, updated, and improved upon in the years ahead.

On behalf of the members and directors of AACJC, AASCU, and NASULGC, we wish to express our sincere appreciation to W. John Minter and Howard R. Bowen for their commitment to objective research and their valued contributions to public understanding of the higher education enterprise. We also wish to thank the members of the study's Advisory Committee and the participating institutions which have strengthened this report in many ways.

Edmund J. Gleazer, Jr. President, AACJC	Allan W. Ostar President, AASCU	Robert L. Clodius President, NASULGC

PREFACE

This is the first of a projected series of biennial reports on financial and educational trends in the public sector of American higher education. The purpose of the series is to monitor the progress of public colleges and universities regularly and to provide reliable and timely information for the use of government officials, educators, donors, faculty, students, and other persons or groups interested in public higher education. The study is sponsored by a consortium of three national bodies: American Association of Community and Junior Colleges, American Association of State Colleges and Universities, and National Association of State Universities and Land-Grant Colleges. It is financed by grants from the Ford Foundation and the Exxon Education Foundation.

The initial report presented here covers the period 1976-77 through 1978-79 with some data available for earlier years and for 1979-80. In the future it is expected that the annual statistical series will be updated at least every two years and included in regular published reports on current developments in the public sector. The second biennial report is scheduled for the summer of 1982.

The study is based on a stratified sample of 135 accredited institutions of which 95 participated. These institutions represent all parts of the public sector except autonomous professional schools. The universe from which the sample was drawn is about 1,300 institutions.

The participating institutions have been superbly cooperative in supplying the basic data. As the study becomes established and known, the rate of response will undoubtedly grow.

A comparable study has been conducted for five years for independent (or private) colleges and universities based on a sample of 135 institutions. The report on the study of independent institutions may be obtained from the National Association of Independent Colleges and Universities, 1717 Massachusetts Avenue, N.W., Washington, D.C., 20036. The cost is $7.50 postpaid.

The following persons or organizations have been supportive and helpful in many ways: Robert L. Clodius of the National Association of State Universities and Land-Grant Colleges; Fred Crossland of the Ford Foundation; Edmund J. Gleazer, Jr., of the American Association of Community and Junior Colleges; Walter Kenworthy of the Exxon Education Foundation; Allan W. Ostar of the American Association of State Colleges and Universities; Dorothy Pearson and Janet Tanner of Claremont, California who assisted in the preparation of the manuscript; and Richard Devine and Nancy VanDerveer of Boulder, Colorado who had an important role in the analysis and preparation of the statistics.

The study has been designed and executed in consultation with an Advisory Committee whose suggestions and criticisms were extraordinarily helpful. The members of this Committee are:

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ACE

Having made these acknowledgements, the undersigned accept full responsibility for the report.

W. John Minter

Howard R. Bowen

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CHAPTER I

INTRODUCTION

This report is the first of what is expected to be a regular series on the financial and educational condition of the public sector of American higher education. This series is an outgrowth of similar periodic reports prepared by the authors relating to the independent or private sector. The demonstrated usefulness of those reports has led to the launching of the second series on public colleges and universities.

The public sector has grown prodigiously over the past several decades--not only in absolute numbers of institutions and enrollments but also in numbers relative to the independent sector. What has occurred might be termed a revolution in American higher education. But within the public sector itself has occurred another revolution, namely, the explosive expansion of the two-year colleges relative to the four-year institutions. These trends are shown in table 1.

It should be noted, however, that the independent sector has not declined in number of institutions or enrollments. It too has grown. But its growth has been small compared to that in the public sector until today the private sector serves a little less than one-fourth of the students and the public sector over three-fourths, whereas, only thirty years ago, the two sectors shared enrollments about equally.

Though the public sector has experienced amazing growth over recent decades, it is not without problems and uncertainties. The outlook for different types of public institutions varies, and within each type particular colleges or universities face different futures. Throughout the public sector educational leaders are deeply concerned about the future. Will enrollments hold up sufficiently so that tuition income plus public appropriations based on enrollment-driven formulas will provide enough money? Will public attitudes toward education provide adequate political support to maintain academic standards? Will public disenchantment with government lead to mindless tax cutting without regard for the maintenance of essential public services including higher education? Can the funding sources keep pace with double-digit inflation?

There are many observers of higher education who believe that educational quality has slipped from where it stood at the beginning of the 1970s and that continuation of the financial austerity of that decade would lead to unacceptable deterioration of both finances and educational performance.

TABLE 1

NUMBER OF INSTITUTIONS AND ENROLLMENTS,
PUBLIC AND PRIVATE SECTORS OF AMERICAN HIGHER EDUCATION,
1949-50 TO 1977-78

	1950-51	1960-61	1970-71	1976-77	1977-78[1]
Numbers[2]					
Institutions					
Public four-year	345	368	442	558	561
Public two-year	292	346	659	909	925
Private four-year	970	1,047	1,234	1,370	1,397
Private two-year	235	247	238	238	247
Total	1,842	2,008	2,573	3,075	3,130
Enrollments (000 omitted)					
Public four-year	986	1,742	4,325	4,890	4,970
Public two-year	168	394	1,520	2,470	2,600
Private four-year	1,093	1,414	2,026	2,230	2,310
Private two-year	50	60	114	120	130
Total	2,297	3,610	7,985	9,710	10,010
Percentages[2]					
Institutions					
Public four-year	19%	18%	17%	18%	18%
Public two-year	16	17	26	30	30
Private four-year	53	52	48	45	45
Private two-year	13	12	9	8	8
Total	100%	100%	100%	100%	100%
Enrollments					
Public four-year	43%	48%	54%	50%	50%
Public two-year	7	11	19	25	26
Private four-year	48	39	25	23	23
Private two-year	2	2	1	1	1
Total	100%	100%	100%	100%	100%

SOURCE: American Council on Education, A Fact Book of Higher Education, Third Issue 1977, p. 146; Second Issue 1977, p. 96.

[1]Preliminary estimates.

[2]Includes specialized institutions such as free-standing theological schools, music conservatories, and law schools. These are excluded from the present study.

Most public institutions do not face the problem of sheer survival as do some private colleges and universities--though there is talk in some states of shutting down particular institutions where enrollments have not reached planned levels or have declined. But the problem of most public institutions is one of undernourishment rather than extinction.

It is in an atmosphere of uncertainty bordering on discouragement that the present series of reports on the condition of the public sector is inaugurated. To provide a base for judging what is happening today, we shall be providing data covering several previous years and thus observing trends in finances and in educational performance.

Scope and Method

The study is limited to accredited public institutions of higher education of the following types (as defined by the Carnegie Commission on Higher Education):[1]

1. Research Universities I (awarded at least 50 Ph.D.s in 1973-74 and included among the leading 50 universities in financial support of academic science).

   Research Universities II (awarded at least 50 Ph.D.s in 1973-74 and included among the leading 100 universities in financial support of academic science).

2. Doctorate-Granting Universities I (awarded 40 or more Ph.D.s in 1973-74 or received at least $3 million in federal funds.

   Doctorate-Granting Universities II (awarded at least 10 Ph.D.s in 1973-74).

3. Comprehensive Universities and Colleges I (enrolled more than 2,000 students and offered a liberal arts program and at least two professional programs).

   Comprehensive Universities and Colleges II (enrolled more than 1,500 students and offered a liberal arts program and at least one professional program).

4. Two-year Colleges.

These four types include about 1,393 institutions serving about 8,600,000 students in 1976. They represent 95 percent of the institutions and 98 percent of the enrollment in the public sector.

---

[1] A Classification of Institutions of Higher Education (Berkeley: Carnegie Commission on Higher Education, 1976).

The excluded types of institutions are specialized professional schools (such as music conservatories and theological seminaries). These were not included because of special issues and problems requiring detailed study beyond the limits of available resources.

The study is based on a sample of 135 institutions of which 95 participated. These represent about 7 percent of the more than 1300 institutions in the population. The sample was drawn to insure representation of the several types of institutions, of four broad regions of the country, and of institutions of various sizes as measured by enrollment. The participating institutions are listed at the end of this chapter.

In the preparation of this report, the participating institutions were asked to submit copies of the following documents:

Higher Education General Information Survey (HEGIS)
Enrollment, Salaries, Finance

Salary Information as submitted to AAUP

Audited financial statement and supporting schedules

Voluntary support survey.

In addition, each was asked to respond to a questionnaire, parts of it to be filled out by the director of admissions, chief student aid officer, chief academic officer, housing director, chief financial officer, a senior faculty member, the president or chancellor, and two students.

The study is based primarily on the tabulation and analysis of these documents. As would be expected, the rate of response has varied for different documents and different questions. For some items, particularly financial and enrollment data, the response has been almost perfect. For some other items, the response has been less but nevertheless remarkably good--in almost all cases above 70 percent. In our judgment, the data are dependable.

In the analysis of the data, emphasis is given to indicators reflecting changes over time in the condition of the public sector. The basic question to be answered is: In what ways are the public colleges and universities gaining ground, holding their own, or losing ground? The analysis is in three parts: (1) consolidated trends for all institutions; (2) comparative trends for different types of institutions; and (3) estimates of the overall condition of each institution included in the sample.

The data derived from the sample for any given type of institution are weighted to produce reasonably reliable estimates for the total population of public institutions of all kinds. Six sets of weights are used, each applied to a particular kind of data as follows:

Data pertaining to:	Weighting factor:
Students	enrollments (full-time equivalent)
Faculty	enrollments (full-time equivalent)
Administrative and general service staff	enrollments (full-time equivalent)
Revenues and expenditures	total expenditures
Assets and liabilities	total assets
Opinions	number of institutions

The actual numerical weights are presented in the tabulation on page 6.

As can be readily seen, there are considerable differences in the distribution of the several weights among the four types of institutions. For example, with respect to assets and expenditures, the Research Universities are overwhelming; with respect to number of institutions, the Two-year Colleges are dominant, etc.

These weights are important primarily in calculating the aggregate figures for all four types of institutions combined. Such aggregate figures are usually intended to describe the experience or behavior of the entire public sector of higher education taken as a whole. Many readers will find separate data for the several types of institutions more interesting than the aggregate data. This weighting procedure does not affect separate data for each institutional type.

The data are frequently expressed as index numbers. An index number simply expresses the percentage relationship between a datum for a given year and the corresponding datum for a base year. For example, if total expenditures for a particular group of colleges in 1976-77 were $100 million and in 1979-80 were $150 million, the index numbers would be 100 for 1976-77 and 150 for 1979-80. On the basis of these numbers one could say that expenditures had increased 50 percent over the period from 1976-77 to 1979-80.

The sources of financial data for this survey are audited financial statements and supporting schedules supplied by the institutions. These statements have been revised to meet standard definitions established by the American Institute of Certified Public Accountants and the National Association of College and University Business Officers. During the revision, the study staff has been in contact with the financial officers of the institutions to clear up ambiguities or to obtain missing data. The finally revised documents have been verified by the financial officers of the reporting institutions.

NUMERICAL WEIGHTS

Weighting Factor	Research Universities	Doctorate-Granting Universities	Comprehensive Universities and Colleges	Two-Year Colleges	Total
Enrollments[1]	.180	.097	.278	.445	1.000
Number of Faculty[2]	.180	.097	.278	.445	1.000
Number of Administrative and General Service Staff[2]	.180	.097	.278	.445	1.000
Total Expenditures[3]	.388	.145	.264	.203	1.000
Total Assets[4]	.373	.150	.284	.193	1.000
Number of Institutions	.044	.041	.262	.653	1.000

[1]Based on enrollment data for 1975-76 from the National Center for Education Statistics.

[2]In the absence of data on faculty and staff by types of institutions, enrollment data were used as the basis for the weights.

[3]Based on Total Current Fund Expenditures and Mandatory Transfers in 1975-76 as shown in the Higher Education General Information Survey of the National Center for Education Statistics.

[4]Based on Book Value of Physical Plant Assets (land, buildings, and equipment) in 1975-76 plus Book Value of Endowment Assets for the same year as shown in the Higher Education General Information Survey of the National Center for Education Statistics.

LIST OF PARTICIPATING INSTITUTIONS

Research Universities

Rutgers, The State University of New Jersey, New Brunswick Campus, NJ
State University of New York at Buffalo, Main Campus, NY
University of California at Los Angeles, CA
University of Colorado, Boulder, CO
University of Georgia, Athens, GA
University of Kentucky, Main Campus, Lexington, KY
University of Michigan, Ann Arbor, MI
University of Oregon, Main Campus, Eugene, OR
University of Washington, Seattle, WA

Doctorate-Granting Universities

Ball State University, Muncie, IN
Indiana State University, Main Campus, Terre Haute, IN
Northern Illinois University, DeKalb, IL
University of Montana, Missoula, MT
University of South Dakota, Main Campus, Vermillion, SD
University of Toledo, Toledo, OH
Virginia Commonwealth University, Richmond, VA
Western Michigan University, Kalamazoo, MI

Comprehensive Universities and Colleges

Appalachian State University, Boone, NC
Boise State University, Boise, ID
Boston State College, Boston, MA
California State University, Chico, CA
Eastern Montana College, Billings, MT
Evergreen State College, Olympia, WA
James Madison University, Harrisonburg, VA
Kearney State College, Kearney, NE
Livingston University, Livingston, AL
Mankato State University, Mankato, MN
Morehead State University, Morehead, KY
North Carolina Central University, Durham, NC
Northeast Louisiana University, Monroe, LA
Northern Montana College, Havre, MT
Northern State College, Aberdeen, SD
Old Dominion University, Norfolk, VA
Pembroke State University, Pembroke, NC
Salem State College, Salem, MA
South Carolina State College, Orangeburg, SC
State University of New York, Plattsburgh, NY
Stockton State College, Pomona, NJ
University of Maine at Farmington, ME
University of Southern Colorado, Pueblo, CO
Virginia State College, Petersburg, VA
Western Illinois University, Macomb, IL
West Georgia College, Carrollton, GA

Two-Year Colleges

Albany Junior College, Albany, GA
Amarillo College, Amarillo, TX
Brainerd Community College, Brainerd, MN
Butler Community College, Butler, PA
Casper College, Casper, WY
Central Technical Community College, Hastings, NE
Central Virginia Community College, Lynchburg, VA
Cerritos College, Norwalk, CA
City Colleges of Chicago, Kennedy-King College, IL
City Colleges of Chicago, The Loop College, IL
City Colleges of Chicago, Truman College, IL
Clark County Community College, Las Vegas, NV
Coastal Carolina Community College, Jacksonville, NC
Dodge City Community Junior College, Dodge City, KS
Durham Technological Institute, Durham, NC
Essex County College, Newark, NJ
Greenfield Community College, Greenfield, MA
Golden West College, Huntington Beach, CA
Hagerstown Junior College, Hagerstown, MD
Hibbing Community College, Hibbing, MN
Howard College at Big Spring, TX
Hutchinson Community Junior College, Hutchinson, KS
John C. Calhoun State Community College, Decatur, AL
Lane Community College, Eugene, OR
Lassen College, Susanville, CA
Lewis & Clark Community College, Godfrey, IL
Lorain County Community College, Elyria, OH
Maricopa Technical Community College, Phoenix, AZ
Mayland Technological Institute, Spruce Pine, NC
Mississippi Gulf Coast Junior College, Jackson County, Gautier, MS
Mississippi Gulf Coast Junior College, Jefferson Davis, Gulfport, MS
Mississippi Gulf Coast Junior College, Perkinston, MS
Mohegan Community College, Norwich, CT
Monroe County Community College, Monroe, MI
Montcalm Community College, Sidney, MI
Montgomery County Community College, Blue Bell, PA
Motlow State Community College, Tullahoma, TN
North Dakota State School of Science, Wahpeton, ND
Northeastern Oklahoma A & M College, Miami, OK
Northern Nevada Community College, Elko, NV
Northern Virginia Community College, Annandale, VA
Palomar College, San Marcos, CA
Piedmont Virginia Community College, Charlottesville, VA
Pikes Peak Community College, Colorado Springs, CO
Rock Valley College, Rockford, IL
St. Louis Community College District, St. Louis, MO
Seattle Community College, Central Campus, Seattle, WA
Southern West Virginia Community College at Logan, WV
Tallahassee Community College, Tallahassee, FL
Tidewater Community College, Portsmouth, VA
Utica Junior College, Utica, MS
Willmar Community College, Willmar, MN

CHAPTER II

ENROLLMENT AND ADMISSIONS

Students are the principal reason for being of most colleges and universities. They are also the main source of revenue, either directly or indirectly. In almost all cases, public institutions derive the bulk of their financial support from tuitions and student fees and from state and local appropriations based predominantly on enrollments. Some observers argue that institutions are excessively dependent on students, dependent to the degree that they are deprived of the autonomy necessary for sound educational policies and decisions. Nevertheless, because this dependence on students for the bulk of institutional revenue is not likely to be relieved much, enrollment trends are and will probably continue to be a major factor affecting the financial condition of public institutions. In this chapter we review trends in admissions, attrition, and enrollments over the period 1975-76 to 1979-80.

Enrollment

The official figures of the National Center for Education Statistics on autumn enrollment in the public sector over recent years are as follows:

	Total Number of Students	Index Number
1976-77	8,712,000	100.0
1977-78	8,909,000	102.3
1978-79	8,844,000	101.5
1979-80	9,097,000	104.4

The enrollment figures for our particular sample of institutions, as shown in table 2, follow a slightly different trend because they are expressed in full-time equivalent students. The reason for the slight difference is that in recent years the number of full-time students has been declining while the number of part-time students has been increasing. As a result the number of full-time equivalent students has grown less rapidly than the head count.

A word of caution about enrollment data is in order. Institutions, and statistical agencies as well, differ in their method of counting part-time students and non-degree-credit students. The data used in this report reflect, so far as possible, changes in comprehensive enrollment of all categories of students with consistent definitions over time. However,

TABLE 2

OPENING FALL ENROLLMENT, FULL-TIME EQUIVALENTS,
BY TYPE OF INSTITUTION, 1976-77 TO 1979-80
(Index Numbers: 1976-77 = 100)

	1976-77	1977-78	1978-79	1979-80
All Types of Institutions Combined				
Freshmen and Sophomores	100	98	98	104
Juniors and Seniors	100	100	99	99
Sub-total: Undergraduates	100	98	98	102
Graduate Students	100	98	96	94
Professional Students	100	93	99	99
Other	100	94	90	96
Sub-total: Graduates, Professional, Other	100	98	95	102
Grand Total: All Students	100	98	97	102
Research and Doctorate-Granting Universities				
Freshmen and Sophomores	100	102	103	107
Juniors and Seniors	100	99	98	99
Sub-total: Undergraduates	100	100	101	103
Graduate Students	100	98	101	96
Professional Students	100	93	93	93
Other	100	84	79	66
Sub-total: Graduates, Professional, Other	100	95	95	91
Grand Total: All Students	100	99	99	100

TABLE 2 (Continued)

	1976-77	1977-78	1978-79	1979-80
Comprehensive Universities and Colleges				
Freshmen and Sophomores	100	100	97	102
Juniors and Seniors	100	101	98	97
Sub-total: Undergraduates	100	101	98	100
Graduate Students	100	95	86	82
Professional Students	100	81	101	99
Other	100	85	85	90
Sub-total: Graduates, Professional, Other	100	89	84	84
Grand Total: All Students	100	99	96	98
Two-Year Colleges				
Grand Total	100	96	97	106

it is probable that the enrollment presented are less than complete because of the practice of some institutions of omitting non-degree-credit students from their enrollment figures.

As shown in table 2, there have been substantial differences in FTE enrollment trends for different categories of students. Over the years from 1976-77 to 1979-80, total enrollment for all types of institutions increased by 2 percent. Freshmen and sophomore enrollment increased by 4 percent but junior and senior enrollment dropped off slightly. Enrollments of graduate students fell off sharply while the number of professional and other students declined slightly. These trends were similar for each of the three types of institutions. However, the Two-Year Colleges experienced a substantial growth, the Comprehensive Universities and Colleges showed a slight decline in total enrollment and a pronounced decline in number of graduate and other students, and the Research and Doctorate-Granting Universities maintained about the same number of students.

Table 3 shows changes in the percentage distribution of students between full-time and part-time (expressed as full-time equivalents). The data indicate that the relative number of part-time students is growing in the comprehensive and two-year institutions and falling in the research and doctorate-granting universities. Overall, the percentage is rising slowly.

Admissions

Statistics on admission of new students over the past several years provide some indication of trends in the ability of institutions to recruit qualified new students. Table 4, which applies to all types of public institutions combined, shows that little change occurred since 1975-76. The numbers of applications received, the numbers offered admission, and numbers enrolled varied only slightly. The scores of entering freshmen on entrance examinations[1] fell but only a little more than the decline in the scores nationwide (table 6), and the proportions of entering students by rank in high school class remained about constant. There is nothing in table 4 to suggest significant change in the recruitment of students. If anything, there was a slight improvement.

Table 5 provides data by types of institutions on Scholastic Aptitude Test scores and rank in high school class for entering freshmen. These data show about the same decline in SAT scores over the years since 1975-76 as the national averages of these scores (table 6) and they show little change in rank in high school class. One finds no evidence of significant gains or losses with respect to ability of students as conventionally measured. These data do show substantial differences among the three types of institutions in the academic ability of their students. The Research and Doctorate-Granting Universities are in the lead, and the Two-Year Colleges show the lowest ability levels.

[1]Public institutions use both the Scholastic Aptitude Tests of the College Board (SAT) and the entrance examinations of the American College Testing Program (ACT). In table 4, the ACT scores are converted to SAT scores.

TABLE 3

PERCENTAGE DISTRIBUTION OF OPENING FALL ENROLLMENT BETWEEN FULL-TIME AND PART-TIME STUDENTS, BY TYPE OF INSTITUTION, 1976-77 TO 1979-80

	1976-1977	1977-1978	1978-1979	1979-1980
All Types of Institutions Combined				
Full-time students	77%	77%	76%	76%
Part-time students, FTE[1]	23	23	24	24
Total	100	100	100	100
Research and Doctorate-Granting Universities				
Full-time students	88	89	90	90
Part-time students, FTE[1]	12	11	10	10
Total	100	100	100	100
Comprehensive Universities and Colleges				
Full-time students	87	84	85	85
Part-time students, FTE[1]	13	16	15	15
Total	100	100	100	100
Two-Year Colleges				
Full-time students	65	65	62	61
Part-time students, FTE[1]	35	35	38	39
Total	100	100	100	100

[1]Full-time equivalent.

TABLE 4

RECRUITMENT AND ADMISSION OF UNDERGRADUATE STUDENTS,
1975-76 THROUGH 1979-80,
ALL TYPES OF INSTITUTIONS COMBINED

	1975-1976	1976-1977	1977-1978	1978-1979	1979-1980
Number of completed applications received for admission to freshmen class	100	97	103	103	103
Number of applicants offered admission to freshmen class	100	96	103	103	101
Number of full-time equivalent new freshmen actually enrolled	100	97	100	99	99
Number of full-time equivalent new undergraduate transfer students actually enrolled	100	94	101	106	102
Number of full-time equivalent new undergraduate students, freshmen and transfer, actually enrolled	100	96	99	99	99
Offers of admission to the freshman class as percent of completed applications received	90%	87%	87%	88%	85%
Entering freshmen as percent of admissions offered	74%	77%	71%	72%	74%
Average Combined Scholastic Aptitude Test (SAT)[1] Scores of entering freshmen	831	825	823	819	822
Percent of entering freshmen by rank in school class:					
Top fifth	28%	27%	28%	28%	28%
Second fifth	30	31	31	31	30
Third fifth	23	23	22	22	22
Lowest two-fifths	19	19	18	19	20

[1]For institutions using the entrance examinations of the American College Testing Program (ACT), the scores were converted to the scales for the College Board Scholastic Aptitude Test (SAT).

TABLE 5

SCHOLASTIC APTITUDE TEST (SAT)[1] SCORES AND RANK IN HIGH SCHOOL CLASS, ENTERING FRESHMEN, BY TYPE OF INSTITUTION, 1975-76 TO 1979-80

		Research and Doctorate-Granting Universities	Comprehensive Universities and Colleges	Two-Year Colleges	All Types of Institutions Combined
SAT Combined Scores,[1] Autumn					
	1975-76	937	834	764	831
	1976-77	933	832	753	825
	1977-78	928	829	753	823
	1978-79	926	825	750	819
	1979-80	929	828	752	822
Percent by Rank in High School Class:					
Top Fifth	1975-76	49	30	15	28
	1976-77	48	30	14	27
	1977-78	48	29	15	28
	1978-79	48	31	15	28
	1979-80	47	30	15	28
Second Fifth	1975-76	28	34	30	30
	1976-77	27	35	32	31
	1977-78	28	36	30	31
	1978-79	29	35	28	31
	1979-80	30	35	28	30
Third Fifth	1975-76	16	23	27	23
	1976-77	15	22	27	23
	1977-78	15	24	26	22
	1978-79	14	24	26	22
	1979-80	13	24	26	22
Bottom Two-Fifths	1975-76	7	13	29	19
	1976-77	11	13	26	19
	1977-78	9	11	29	18
	1978-79	9	10	31	19
	1979-80	10	12	31	20

[1]For institutions using the entrance examinations of the American College Testing Program (ACT), the scores were converted to the scales for the College Board Scholastic Aptitude Test (SAT).

TABLE 6

NATIONAL AVERAGE SCORES ON SAT[1] COLLEGE ADMISSIONS TESTS AS COMPARED WITH AVERAGE SAT SCORES FOR THE SAMPLE OF INSTITUTIONS INCLUDED IN THIS STUDY (Index Numbers: 1975-76 = 100)

Year in Which Test Administered	SAT Scores National Average Scores	Index	SAT Scores Averages for Sample Scores	Index
1975-76	903	100.0	831	100.0
1976-77	899	99.6	825	99.2
1977-78	897	99.4	823	99.0
1978-79	894	99.1	819	98.6
1979-80	---	---	822	98.8

[1]For institutions using ACT scores, mean ACT scores were converted to SAT equivalents.

A general review of the data in tables 4, 5, and 6 suggests that the capacity of the institutions to recruit qualified students has not changed very much, if at all, over the past five years.

Student Attrition

A potential barometer of the progress of colleges and universities is the rate of student attrition or dropout. We were able to obtain figures on this subject for only the most recent year and for just two types of institutions.[1] The percentage of undergraduate students leaving college in 1979-80 was 14 percent for Research and Doctorate-Granting Universities and 27 percent for Comprehensive Universities and Colleges. The corresponding figures for private institutions were 5 percent and 11 percent.

An indirect measure of attrition is the number of new undergraduates enrolled as a percentage of all undergraduates. This is an indication of how many new students are needed to maintain the total enrollment. The data, shown in table 7, suggest that there was virtually no change in numbers enrolled over the years 1976-77 to 1979-80.

Overall Enrollment Situation

Because enrollment is so significant as an indicator of the condition of colleges and universities, we attempted to tap every possible source of information on the subject. The final effort was to inquire of the institutions whether they would have preferred to enroll additional students in 1979-80, and, if so, how many could have been readily accommodated. We could not obtain this information for earlier years and therefore could not plot a trend indicating changes in the eagerness for additional students. However, the figures for 1979-80, which are of interest in their own right, are shown in table 8. Most respondents (39 of 66) indicated that they would have preferred more students, and the percentage increase that could be readily accommodated (median) was 12 percent. When these responses are considered by types of institutions, most of the universities were satisfied, and those not satisfied could have handled only 3 percent more students. A slight majority of the comprehensive institutions wanted more students and they could have taken 6 percent more. But an overwhelming number of the Two-Year Colleges (24 of 32) wanted more students and they could have accommodated a whopping 20 percent more.

We also asked the sample institutions to estimate their enrollments for the next three years (table 9). The universities projected a 1 percent decline, the comprehensives a 3 percent increase, and the Two-Year Colleges a 7 percent increase.

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[1] Dropout rates in two-year institutions have little meaning because many students are not regularly enrolled but come and go without "dropping out" in any significant sense.

TABLE 7

NUMBER OF NEW UNDERGRADUATE FRESHMEN AND TRANSFER STUDENTS ENROLLED AS PERCENTAGE OF TOTAL UNDERGRADUATE ENROLLMENT

	1976-1977	1977-1978	1978-1979	1979-1980
Research and Doctorate-Granting Universities	33%	34%	34%	33%
Comprehensive Universities and Colleges	40	40	40	41
Two-Year Colleges[1]	89	87	86	88
All Types of Institutions Combined	60	60	59	60

[1]If attrition were zero, the Two-Year Colleges would need to replace 50 percent of their students each year, as compared to 25 percent for the four-year institutions.

TABLE 8

SHORTFALL IN UNDERGRADUATE ENROLLMENT (Full-Time Equivalent), 1979-80

Responses of Institutions to Question: Would you have preferred to enroll additional students?					For those reporting preference for more students,[1] percentage increase in enrollment that could have been accommodated without significant additions to faculty, housing, & classrooms.
	Yes	No	No Reply	Total	
Research and Doctorate-Granting Universities	4	11	4	19	3%
Comprehensive Universities and Colleges	11	8	10	29	6
Two-Year Colleges	24	8	22	54	20
All Types of Institutions Combined	39	27	36	102	12

[1]Median.

TABLE 9

INSTITUTIONAL PROJECTIONS OF UNDERGRADUATE ENROLLMENT
(FULL-TIME EQUIVALENT) BY TYPE OF INSTITUTION
(Index Numbers: 1979-80 = 100)

	Actual	Estimated Enrollment		
	1979-80	1980-81	1981-82	1982-83
Research and Doctorate-Granting Universities	100	99	98	99
Comprehensive Universities and Colleges	100	101	103	103
Two-Year Colleges	100	103	105	107
All Types of Institutions Combined	100	101	103	104

Conclusions

The data on enrollments when viewed as a whole reflect very little change. The following generalizations might be made:

1. Full-time equivalent enrollment remained about steady, though the student bodies of the comprehensive institutions declined slightly and of the Two-Year Colleges increased.

2. The composition of the student bodies changed. The number of freshmen and sophomores and of two-year college students increased and graduate enrollments declined. The number of part-time students increased relative to the number of full-time students.

3. The ability of the institutions to recruit and retain qualified students held fairly steady.

4. The three types of institutions varied considerably in their expressed wish for more students and in their projection of future enrollments.

5. The overall enrollment situation can only be viewed as steady and the confidence of institutions in the near future strong.

The most significant findings concerned the differences among the three types of institutions with respect to enrollment trends. The Two-Year Colleges registered the greatest gains in actual enrollments, they projected the largest future increases in enrollments, and they indicated the greatest ability to handle additional enrollment. At the other extreme, the universities experienced stable enrollment, projected no increase in number of students, and indicated little capacity for enrollment growth. The position of the comprehensive institutions lay between the other two though their actual enrollments declined a little. Is the meaning of these findings that the universities are stable and relatively secure while the Two-Year Colleges are ambitious to continue their relatively rapid growth? And what will happen to the comprehensive institutions which seem to occupy an intermediate position? We do not have answers to these questions but our data do suggest that the three types of institutions seem to follow somewhat different trends and to envision somewhat different futures.

CHAPTER III

FACULTY AND OTHER STAFF

People are the most important and most costly resource employed in higher education, and a large fraction of the expenditures of colleges and universities are personnel costs. Trends in numbers, compensation, and working conditions of faculty and staff are important indicators of the financial and educational soundness and progress of colleges and universities. This is so especially in the present period of financial stringency and inflation when institutions are tempted, or forced, to seek financial savings by reducing numbers of faculty and staff or by slowing down the rate of annual increases in compensation.

In the past, data concerning faculty have been readily available but information about administrators and non-academic staff has been extremely scarce. Despite the fact that the number of non-academic staff exceeds the number of faculty and that total pay of the non-academic workers is almost as large as total faculty compensation, information about these non-faculty employees has been almost a blank. We are pleased, therefore, to be able to supply some new data about these people.

Faculty Size

The number of full-time equivalent faculty has declined slightly during the past three years (table 10) while student enrollment has grown a little (table 2). The result has been a gradual increase in the ratio of students to faculty from 18.8 in 1977-78 to 19.3 in 1979-80, and a correspondingly small increase in the teaching load of the faculty (see table 10). A change of this magnitude would not be regarded as significant except for the fact that the increase in teaching load was concentrated almost entirely in the Two-Year Colleges.

Faculty Compensation

The data on faculty compensation for our sample of institutions are available only for 1978-79 and 1979-80. Over the years, we shall be able to build up a reliable series over a longer period, but so far we have not been able to provide much longitudinal information. Our sample of institutions reported a 9.7 percent increase in faculty compensation in 1978-79. This figure is considerably higher than the increases reported by other sources. The increase in 1979-80 reported by our sample was 11.3 percent which we suspect is probably too high to represent the universe of public institutions. In this report, we shall therefore limit our discussion of faculty compensation to data derived from other sources.

TABLE 10

CHANGES IN NUMBER OF FACULTY AND IN STUDENT-FACULTY RATIOS
1977-78 TO 1979-80

	1977-78	1978-79	1979-80
Number of full-time equivalent faculty, all ranks (index)	100	98	99
Ratio of full-time equivalent students to full-time equivalent faculty:			
Research and Doctorate-Granting Universities	14.8	14.8	14.9
Comprehensive Universities and Colleges	17.7	17.1	17.6
Two-Year Colleges	19.8	20.3	20.6
All types of institutions combined	18.8	19.0	19.3

Table 11 shows average faculty compensation in various types of four-year institutions over the period 1976-77 to 1978-79. These figures indicate that faculty pay in public universities has been a little lower than in non-church related universities and colleges, but generally higher than in other types of private institutions. The companion table 12 presents comparative information on percentage changes in compensation from year to year. These figures, covering a longer span of years, suggest that compensation in the public sector has generally moved ahead somewhat more rapidly than in the private sector. For comparative purposes, annual changes in the Consumer Price Index and in Average Weekly Earnings are shown in table 12. These figures indicate that faculty compensation in public institutions grew more rapidly than the Consumer Price Index in the years through 1972-73, but thereafter grew less rapidly and especially fell behind in the high-inflation years of 1974-75 and 1978-79. The comparison with Average Weekly Earnings was even less favorable. Evidently some of the increased costs of higher education during the 1970s were shifted to faculty in the form of lowered real compensation.

Faculty compensation probably increased substantially in 1979-80 and likely will increase again in 1980-81. However, in those years inflation has been rampant and it is doubtful if another decline in real earnings of faculty will have been averted.

Faculty Tenure

A great deal of controversy has swirled around the subject of faculty tenure. Many observers of higher education have feared that in an era of slow growth of higher education, the percentage of faculty on tenure would steadily increase. It has been widely believed that as faculties grew older and fewer young faculty members were appointed, the faculties might become almost fully "tenured-in" with resulting impairment of administrative flexibility. Table 13 provides data on the percentage of faculty with tenure. They show that for all three types of public institutions, about two-thirds of the faculty are on tenure. Whether this is a dangerously high percentage is uncertain. It is substantially higher than the tenure percentage for private colleges which was about 54 percent, but it is not near the figures of 80 and even 90 percent that have sometimes been predicted.[1] Moreover, the tenure percentage appears to be increasing slowly, if at all. Our opinion is that the tenure percentage should be watched but that with the limited data available, it would be wise to reserve judgment on whether it is getting out of hand.

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[1] A recent release of the National Center for Education Statistics (Chronicle of Higher Education, May 27, 1980, p. 10) indicates the following tenure percentages:

	Public Institutions	Private Institutions
1978-79	65.1%	56.1%
1979-80	66.3	56.3

TABLE 11

AVERAGE FACULTY COMPENSATION
BY TYPE OF INSTITUTION
(ALL RANKS)

	1976-77	1977-78	1978-79
Universities[1]			
Public	$22,120	$23,350	$25,420
Independent Non-Church-Related	24,910	26,190	28,510
Independent Church-Related	20,960	21,890	23,390
College I[2]			
Public	20,620	21,830	23,070
Independent Non-Church-Related	19,510	20,790	22,130
Independent Church-Related	17,630	18,550	19,770
College II[3]			
Public	17,890	19,180	19,960
Independent Non-Church-Related	18,100	19,050	20,480
Independent Church-Related	15,880	16,780	17,880
Two-Year Colleges[4]			
Public	18,940	20,130	20,750
Independent Non-Church-Related	14,110	14,640	16,790
Independent Church Related	12,960	13,750	14,260

SOURCE: AAUP Bulletin, Summer, 1977, p. 154; September 1978, p. 197; and Academe, September 1979, p. 334. Refers to full-time faculty.

[1]Institutions awarding at least 15 earned doctorates per year in at least three non-related disciplines.

[2]Institutions awarding degrees above the bachelor's degree but not qualifying as "universities."

[3]Institutions awarding only the bachelor's degree or equivalent.

[4]Two-year institutions with academic ranks.

TABLE 12

PERCENTAGE CHANGES IN FACULTY COMPENSATION,[1] ALL ACADEMIC RANKS, BY TYPE OF INSTITUTION, 1969-70 THROUGH 1978-79

	1970-71 from 1969-70	1971-72 from 1970-71	1972-73 from 1971-72	1973-74 from 1972-73	1974-75 from 1973-74	1975-76 from 1974-75	1976-77 from 1975-76	1977-78 from 1976-77	1978-79 from 1977-78
Universities[2]									
Public	5.7%	4.3%	4.9%	5.3%	6.3%	6.8%	5.5%	6.0%	7.2%
Independent Non-Church-Related	6.3	4.3	4.2	5.6	5.1	6.5	5.9	5.1	6.5
Independent Church-Related	7.3	4.4	5.8	4.9	5.2	7.1	10.1	5.6	6.8
Colleges I[2]									
Public	5.5	3.9	5.6	7.1	7.6	6.2	5.1	6.1	7.0
Independent Non-Church-Related	8.7	4.9	4.9	4.9	5.4	5.6	5.3	6.0	5.9
Independent Church-Related	7.5	4.7	5.2	5.3	6.0	6.3	7.1	5.8	7.1
Colleges II[2]									
Public	6.6	5.7	4.8	5.8	6.5	5.9	5.8	6.7	7.6
Independent Non-Church-Related	6.4	4.4	4.2	4.6	4.8	6.0	5.7	5.6	6.2
Independent Church-Related	7.3	4.1	4.7	4.5	5.1	5.4	5.1	5.4	6.2
Two-Year Colleges[2]									
Public	7.0	7.3	4.7	6.6	6.1	6.8	3.9	6.2	7.3
Independent Non-Church-Related	10.9	5.0	6.2	7.3	6.9	7.4	5.8	4.0	6.9
Independent Church-Related	--*	--*	5.9	--*	5.0	8.7	9.1	6.7	5.2
Consumer Price Index	5.4	3.8	4.8	8.7	10.0	7.3	5.8	6.7	9.5
Average Weekly Earnings, Private Non-Agricultural Industries	5.4	6.8	6.9	6.5	6.0	6.9	7.4	7.9	7.9

SOURCE: AAUP Bulletin, Summer, 1971, p. 226; Summer 1972, p. 182; Summer 1973, p. 192; Summer 1974, p. 176; Summer 1975, p. 127; Summer 1976, p. 210; Summer 1977, p. 156; September 1978, p. 198; Academe, September 1979, p. 333.

[1]Includes salaries and fringe benefits. [2]For description of institutions, see footnotes 1-4, Table 11.

*Sample too small to be meaningful.

TABLE 13

DATA RELATING TO STATUS OF FACULTY,
BY TYPE OF INSTITUTION, 1977-78 TO 1979-80[1]

	Research and Doctorate-Granting Universities	Comprehensive Universities and Colleges	Two-Year Colleges	All Types of Institutions Combined
Percentage of Faculty on Tenure				
1977-78	62%	62%	64%	63%
1978-79	62	63	64	63
1979-80	63	64	65	64
Faculty Turnover				
Separations as percent of faculty				
1977-78	9	10	4	6
1978-79	9	10	5	7
1979-80	8	9	4	6
New appointments as percent of faculty				
1977-78	9	9	6	7
1978-79	9	9	6	7
1979-80	8	9	5	6

[1]Full-time faculty.

Faculty Turnover

Those concerned about the adverse effects of an era of slow or no growth have predicted an increase in faculty separations and a decline in new faculty appointments. American higher education has already reached the point of slow growth but not the point of decline. During the past three years, the number of separations and of new appointments have been nearly stable (table 13). Taking possible sampling error into account, one could not say that there had been a rising or falling trend in either. As would be expected, however, separations and new appointments are equal in the universities where enrollment has been stable; separations have exceeded new appointments in the comprehensive institutions where enrollment has declined; and new appointments have exceeded separations in the Two-Year Colleges where enrollment has grown substantially. Perhaps the most important finding is that a significant amount of faculty turnover has occurred in all three types of institutions.

Faculty Work Load

In appraising trends in the condition of faculty, we asked a senior faculty member in each sample institution to give his or her opinion about changes in faculty work loads. The responses are tabulated in table 14. Regarding classroom hours, the great majority reported no change. Surprisingly, however, a third or more reported increases in teaching load as measured in number of students. This response is not consistent with the fact that the ratio of students to faculty has increased little in recent years. Yet the perception of increasing student loads was as strong or stronger in the four-year institutions where student-faculty ratios were stable than in the two-year colleges where the ratio was increasing. Perhaps this anomaly teaches us to beware of opinions. Regarding advisory and committee work, two-fifths to a half of the respondents reported that the load is increasing. Here we may be seeing the hidden cost associated with growing participation of faculty in the affairs of the institutions. From the data of table 14, one may legitimately conclude that the overall work load of faculty is probably not declining, and may well be increasing even though the ratio of students to faculty is holding fairly steady.

Supporting Services for Faculty

We also asked senior faculty members to express opinions on trends in supporting services for faculty. The responses are tabulated in table 15. They indicate that secretarial and related assistance is declining in about a third of the institutions, and increasing in 14 percent; that research support is on balance declining slightly in the universities but increasing in the comprehensive and two-year institutions; that professional travel is declining in nearly half the institutions and increasing in only 12 percent. The situation appears mixed, but overall the position of faculty may be deteriorating somewhat with respect to services they value greatly, namely, secretarial assistance and professional travel.

TABLE 14

CHANGES IN FACULTY WORK LOAD, 1978-79 TO 1979-80,
AS REPORTED BY SENIOR FACULTY MEMBERS

	Percentage of Reporting Institutions				
	Increase	No Change	Decrease	Don't Know	Trend Consensus[1]
Teaching Load in Number of Classroom Hours					
Research and Doctorate-Granting Universities	15%	85%	0%	0%	15%
Comprehensive Universities and Colleges	9	77	14	0	- 5
Two-Year Colleges	16	77	6	0	10
All Types of Institutions Combined	14	78	8	0	6
Teaching Load in Number of Students					
Research and Doctorate-Granting Universities	46	54	0	0	46
Comprehensive Universities and Colleges	32	64	5	0	27
Two-Year Colleges	34	53	9	3	25
All Types of Institutions Combined	35	56	7	2	27
Load of Advising, Committee Work, etc.					
Research and Doctorate-Granting Universities	38	62	0	0	38
Comprehensive Universities and Colleges	45	55	0	0	45
Two-Year Colleges	47	47	3	3	44
All Types of Institutions Combined	46	50	2	2	44

[1]Percentage of institutions reporting an increase minus percentage reporting a decrease. See methodological comment on page 33.

TABLE 15

CHANGES IN SUPPORTING SERVICES FOR FACULTY, 1978-79 TO 1979-80,
AS REPORTED BY SENIOR FACULTY MEMBERS

	Percentage of Reporting Institutions				
	Increase	No Change	Decrease	Don't Know	Trend Consensus[1]
Secretarial and Related Assistance					
Research and Doctorate-Granting Universities	8%	54%	38%	0%	-31%
Comprehensive Universities and Colleges	5	50	45	0	-41
Two-Year Colleges	19	58	23	0	- 3
All Types of Institutions Combined	14	56	30	0	-15
Research Support					
Research and Doctorate-Granting Universities	31	31	38	0	- 8
Comprehensive Universities and Colleges	50	32	18	0	32
Two-Year Colleges	19	44	7	30	11
All Types of Institutions Combined	28	40	13	19	15
Professional Travel					
Research and Doctorate-Granting Universities	15	31	54	0	-38
Comprehensive Universities and Colleges	9	50	41	0	-32
Two-Year Colleges	13	39	48	0	-35
All Types of Institutions Combined	12	41	47	0	-35

[1]Percentage of institutions reporting an increase minus percentage reporting a decrease. See methodological comment on page 33.

Administrative and General Service Employees

Whereas the number of full-time equivalent faculty held steady or possibly declined slightly during the past three years, the number of administrative and general service employees increased substantially. This increase occurred in all three types of institutions and among all three types of non-academic staff--administrators, clerical workers, and other general service workers (see table 16). This growth in non-academic personnel is a little-noticed phenomenon in American higher education and has been going on for many years.

The trend toward growing non-academic staff does not necessarily connote a decline in efficiency of the public sector of higher education. Neither does it indicate a perverse tendency to allow growth of non-academic personnel at the expense of faculty. Rather it is largely the result of a multitude of new socially-mandated demands on higher education. The trend has persisted even during the recent period of financial stringency because of the need to deal with new or growing functions such as affirmative action, remedial programs, increased Social Security taxes, campus security, career counseling and placement, expanded student aid programs, provision for the handicapped, women's athletics, multiple accountability to different public and private agencies, and many others. Many of these new obligations are socially desirable, but overall they do require additional non-academic staff. Indeed some of the financial stringency of the past decade may have been due to the necessity of using resources for these purposes which, in a previous generation, would have been available for academic purposes. At any rate, as shown in table 16, there is a clear and substantial trend toward increased employment of non-academic personnel. Whereas, between 1977-78 and 1979-80, the number of faculty declined by 1 percent and the number of students increased by 5 percent, the number of non-academic workers increased by nearly 7 percent.

Regarding increases in the compensation of non-academic personnel, valid comparisons with increases in faculty compensation are difficult to make. When the percentage changes in non-academic salaries and wages as shown in table 17 are compared with percentage changes in faculty salaries as shown in table 12, it appears that the non-academic workers have received substantially greater increases than the faculties. Some of this disparity has resulted from legislative mandate regarding the compensation of various categories of workers, some from the effects of minimum wage rates.

In mentioning disparities between faculty and other staff, we are not passing judgment and are not attempting to incite conflict between faculty and non-academic groups. Our purpose is only to present facts that bear upon the condition of the public colleges and universities. The apparent need of institutions to enlarge non-academic staffs and to raise their pay by more than the increases available to faculty, is one fact that deserves careful consideration because of its effect on financial stringency.

Conclusions

The time has come to gather together the data reported by the institutions on changes in faculty and staff and to assess their meaning and significance. Perhaps the most general conclusion is that the period under

TABLE 16

NUMBER OF FULL-TIME EQUIVALENT ADMINISTRATIVE AND GENERAL SERVICE EMPLOYEES,[1] 1975-76 THROUGH 1979-80
(Index Numbers: 1975-76 = 100)

	1975-1976	1976-1977	1977-1978	1978-1979	1979-1980
Research and Doctorate-Granting Universities	100	100	100	102	103
Comprehensive Universities and Colleges	100	101	103	108	110
Two-Year Colleges	100	101	109	113	117
All Types of Institutions Combined					
Administrative Staff	100	106	107	111	109
Clerical Staff	100	107	115	116	117
Other General Service Staff	100	101	106	113	118
Total	100	101	107	111	114

[1]General Service Employees include secretarial and clerical employees, tradesmen, and other non-professional and non-administrative workers.

TABLE 17

MEDIAN[1] PERCENTAGE INCREASES OF WAGES AND SALARIES OF ADMINISTRATIVE AND GENERAL SERVICE STAFF, 1975-76 TO 1979-80

	Research and Doctorate-Granting Universities	Comprehensive Universities and Colleges	Two-Year Colleges	All Types of Institutions Combined
Administrative Staff[2]				
1976-77	5%	5%	8%	7%
1977-78	6	7	4	5
1978-79	6	6	7	7
1979-80	7	7	7	7
Clerical Staff[3]				
1976-77	5	6	11	9
1977-78	6	6	6	6
1978-79	7	7	8	8
1979-80	8	8	8	8
Other General Service Staff[3]				
1976-77	7	6	7	7
1977-78	6	6	7	7
1978-79	8	6	9	8
1979-80	7	10	9	9

[1]Average percentage increase granted by median institution.

[2]Excludes presidents. [3]Average hourly rate.

review, the past two to five years, has been a time of relative stability, a stability characterized by financial tightness, but a stability nevertheless. Within this general context, the following specific conclusions may be cited:

1. The number of faculty members has been holding about steady and so has the ratio of students to faculty except in the Two-Year Colleges where enrollment has grown somewhat more rapidly than faculty.

2. During the 1970s, faculty compensation in the public institutions probably moved ahead a bit more rapidly than in the private sector. But it failed to keep pace with the Consumer Price Index and failed by an even wider margin to keep pace with Average Weekly Earnings in private non-agricultural industries. It is clear that one response of public institutions to financial stringency has been to hold increases in faculty compensation below the rate of increase in the cost of living and below the average raises available in the general labor market. Faculty compensation tends to be one of the residual items that bears the brunt of financial tightness.

3. About 64 percent of the faculty are on tenure. This percentage is higher than that in the private sector, but whether it is dangerously high is a matter of debate. Our data suggest that the percentage may be rising at the rate of a percentage point every two years. However, we would want to confirm this rate with a few more annual observations before sounding an alarm.

4. We found no pronounced changes in the rate of faculty turnover. The numbers of faculty separations and new appointments have been at stable annual rates of 6 to 7 percent of the total faculty. These are rates sufficient to allow some infusion of new, younger faculty members, though we have no knowledge of the net effect of this turnover on the composition and characteristics of the faculties.

5. Senior faculty members, in responding to questions about faculty work load, indicated that the load was increasing--especially in the area of student advising and committee work. In responding to questions about services for faculty, they expressed the opinion that secretarial services and professional travel were being curtailed. Apparently, the respondents believe that financial stringency is affecting faculty working conditions adversely.

6. The numbers of non-academic staff (administrators, clerical workers, and other general service employees) are increasing substantially while the numbers of faculty are about stable or declining slightly. This increase is a continuation of a long trend. In the past decade it probably has been due in part at least to the accumulation of new functions and obligations that have been imposed on the institutions.

7. The compensation of non-academic employees has increased more rapidly than that of faculty.

All of this adds up to rather minute changes in the public sector of higher education, changes that reflect basic stability achieved under conditions of financial stringency and with sluggish increases in staff compensation, especially faculty compensation, bearing the brunt.

CHAPTER IV

EDUCATIONAL PROGRAM: CONTENT AND QUALITY

In appraising the condition of colleges and universities, some of the most revealing indicators are trends in the content and quality of programs. In this, our first study of the public sector of higher education, we devoted a great deal of attention to discovering indications of educational progress and also of retrenchment and deterioration. There is, of course, no easy or sure way to get reliable facts about changes in the qualitative performance of colleges and universities. We have relied primarily on the responses of administrators, faculty, and students to wide-ranging questions about programs and resources. We do not place great store by the responses to any single question, but we believe the responses to the many questions we have asked add up to reliable general conclusions. In our studies of the private sector we tried in various ways to get at educational trends and especially to identify areas of retrenchment or deterioration. Regardless of the method used, we obtained about the same responses, namely, that the great majority of institutions, though facing financial stringency, are maintaining their integrity and are neither retrenching nor experiencing significant deterioration. As we shall show in this chapter, we obtained a similar result from our first study of public institutions--but with some important differences.

Methodological Comment

Before proceeding to review the responses, it may be helpful to describe the data. The basic procedure was to ask several persons at each sample institution whether there had been an increase, decrease, or no change in each of many aspects of the institution's operations. For example, referring to the first item in table 18, administrators, faculty members, and students were asked whether there had been an increase, decrease, or no change in the reading skills of students. The responses are recorded as simple percentages.

In addition to these simple percentages, however, another number is shown in the right hand column of table 18 and labeled "Trend Consensus." Each trend consensus is computed simply by subtracting the percentage of respondents reporting "decrease" from those reporting "increase." The difference, which may have a positive or negative sign, indicates the way the trend is running and the strength of the trend. A large, positive number indicates that most respondents are reporting increases. The trend is strong and positive. A large, negative result indicates the opposite--a strong and negative trend. Small numbers indicate a weak trend which can result from about equal percentages of respondents reporting

increases and decreases or from most respondents reporting no change. The sign and size of the trend consensus index thus indicate both the direction and force of a trend, giving each respondent equal weight.

A great many questions were asked in the hope that a general sense of the progress and problems of the institutions would emerge. These questions were directed independently to administrators (chief academic officers and chief student personnel officers), to senior faculty members, and to students (editors of student newspapers and presidents of student bodies). In addition, some broad general questions were directed toward presidents. The results are shown in tables 18 to 26. We shall comment only briefly on these tables. The best way for the reader to grasp their message is to peruse them directly. Our commentary will therefore be confined to broad general observations.

Students: Qualifications, Interests, and Achievements

Representatives of the institutions--administrators, faculty members, and students--were asked for their opinions about current trends in the characteristics of students. The responses are summarized in tables 18 and 19.

Table 18 is concerned with the secondary school preparation of students. Its message is that inadequate preparation continues or is getting worse. Only a small fraction of institutions report improvement. Colleges and universities are of course not directly responsible for the secondary preparation of their students (though it must be admitted that they train the secondary teachers, conduct much pedagogical research and development, and exert some control over the requirements for admission to college). Regardless of who may be responsible, the unsatisfactory preparation of students does impede educational progress of colleges and universities and does impose special costs on them for remedial programs. It cannot be ignored in appraising the condition of the institutions. The situation may not be hopeless, however. When respondents were asked to give their expectations regarding trends in preparation over the next two years, their responses were more favorable suggesting that improvement may possibly be on the way.

Table 19 shows the opinions of the respondents regarding the interests and achievements of students. Many reported that the trend is still in the direction of pronounced orientation toward careers, toward increasing consciousness of grades and credentials, and away from liberal learning. Political activism appeared to be on the wane, the use of drugs is probably decreasing, and the use of alcoholic beverages is increasing. Opinions were mixed on loyalty to the institutions, participation in extracurricular activities, and interest in contemporary public affairs. There was perhaps a weak vote of confidence in the students with respect to conscientious work and general academic achievement. Overall, the responses suggest that trends in the attitudes, competence, and performance of students are not as positive as one might wish. On the other hand, when the same respondents reported on their expectations for the next two years, their responses were considerably more favorable. Are we approaching a turning point in trends relating to students?

TABLE 18

CHANGES IN ACADEMIC PREPARATION OF STUDENTS ADMITTED, 1978-79 to 1979-80, AS INDEPENDENTLY REPORTED BY ADMINISTRATORS, FACULTY, AND STUDENTS, ALL TYPES OF INSTITUTIONS COMBINED[1]

	Percentage of Reporting Institutions				
	Increase	No Change	Decrease	Don't Know	Trend Consensus[2]
Reading Skills					
Chief Academic officer	10%	41%	42%	7%	-32%
Chief student personnel officer	12	40	33	15	-21
Senior faculty member	12	39	47	2	-35
Editor of student newspaper	9	48	28	15	-19
President of student body[3]	15	34	28	23	-13
Writing Skills					
Chief academic officer	12	36	46	6	-34
Chief student personnel officer	10	41	36	13	-26
Senior faculty member	8	38	51	3	-43
Editor of student newspaper	11	37	42	10	-31
President of student body[3]	12	28	39	21	-27
Mathematical Skills					
Chief academic officer	8	48	36	8	-28
Chief student personnel officer	12	48	22	18	-10
Senior faculty member	8	45	36	11	-28
Editor of student newspaper	3	46	18	33	-15
President of student body[3]	10	38	30	22	-20
Humanistic and Social Studies Preparation					
Chief academic officer	8	54	24	14	-16
Chief student personnel officer	12	49	15	24	- 3
Senior faculty member	8	53	29	10	-21
Editor of student newspaper	21	28	25	26	- 4
President of student body[3]	29	39	16	16	+13
Science Preparation					
Chief academic officer	4	66	22	8	-18
Chief student personnel officer	12	56	10	22	+ 2
Senior faculty member	8	46	33	13	-25
Editor of student newspaper	12	35	19	34	- 7
President of student body[3]	19	40	22	19	- 3

[1]Based on responses from 69 chief academic officers, 73 chief student personnel officers, 67 senior faculty members, 61 student newspaper editors, 65 student body presidents, representing 95 institutions.

[2]Percentage of respondents reporting an increase minus percentage reporting a decrease. See methodological comment, p.34.

[3]Or other comparable student leader.

TABLE 19

CHANGES IN STUDENT ACHIEVEMENTS AND INTERESTS, 1978-79 to 1979-80, AS INDEPENDENTLY REPORTED BY ADMINISTRATORS, FACULTY, AND STUDENTS, ALL TYPES OF INSTITUTIONS COMBINED[1]

	Percentage of Reporting Institutions				
	Increase	No Change	Decrease	Don't Know	Trend Consensus[2]
Conscientious Work					
Chief academic officer	26%	39%	19%	16%	+ 7%
Chief student personnel officer	31	51	9	9	+22
Senior faculty member	35	37	25	3	+10
Editor of student newspaper	27	27	38	8	-11
President of student body[3]	28	36	25	11	+ 3
Orientation Toward Careers					
Chief academic officer	72	17	6	5	+66
Chief student personnel officer	75	15	7	3	+68
Senior faculty member	75	22	3	0	+72
Editor of student newspaper	63	32	1	4	+62
President of student body[3]	74	12	5	9	+69
Orientation Toward Liberal Learning					
Chief academic officer	8	29	51	12	-43
Chief student personnel officer	3	37	50	10	-47
Senior faculty member	10	44	44	2	-34
Editor of student newspaper	21	29	42	8	-21
President of student body[3]	25	29	32	14	- 7
Grade and Credential Consciousness					
Chief academic officer	37	47	6	10	+31
Chief student personnel officer	54	38	5	3	+49
Senior faculty member	56	32	10	2	+46
Editor of student newspaper	41	45	8	6	+33
President of student body[3]	48	30	10	12	+38
Loyalty to the Institution					
Chief academic officer	16	67	10	7	+ 6
Chief student personnel officer	20	61	9	10	+11
Senior faculty member	10	67	18	5	- 8
Editor of student newspaper	12	40	39	9	-27
President of student body[3]	35	34	25	6	+10
Participation in Extracurricular Activities					
Chief academic officer	24	49	21	6	+ 3
Chief student personnel officer	32	42	20	6	+12
Senior faculty member	22	44	24	10	- 2
Editor of student newspaper	18	39	39	4	-21
President of student body[3]	35	21	36	8	- 1

TABLE 19 (Continued)

	Percentage of Reporting Institutions				
	Increase	No Change	Decrease	Don't Know	Trend Consensus[3]
General Academic Achievement					
Chief academic officer	22%	59%	13%	6%	+ 9
Chief student personnel officer	24	63	10	3	+14
Senior faculty member	24	46	26	4	- 2
Editor of student newspaper	23	42	25	10	- 2
President of student body[3]	33	38	10	19	+23
Interest in Contemporary Public Affairs					
Chief academic officer	14	52	25	9	-11
Chief student personnel officer	23	45	21	11	+ 2
Senior faculty member	17	50	25	8	- 8
Editor of student newspaper	30	22	38	10	- 8
President of student body[3]	34	32	22	12	+12
Political Activism					
Chief academic officer	10	48	31	11	-21
Chief student personnel officer	8	39	42	11	-34
Senior faculty member	3	45	42	10	-39
Editor of student newspaper	26	30	33	11	- 7
President of student body[3]	31	36	28	5	+ 3
Use of Drugs					
Chief academic officer	8	40	22	30	-14
Chief student personnel officer	6	52	27	15	-21
Senior faculty member	3	37	24	36	-21
Editor of student newspaper	25	40	19	16	+ 6
President of student body[3]	26	26	25	23	+ 1
Use of Alcoholic Beverages					
Chief academic officer	22	45	2	31	+20
Chief student personnel officer	46	38	3	13	+43
Senior faculty member	24	36	12	28	+12
Editor of student newspaper	50	28	6	16	+44
President of student body[3]	48	22	12	18	+36

[1]Based on responses from 69 chief academic officers, 73 chief student personnel officers, 67 senior faculty members, 61 student newspaper editors, 65 student body presidents, representing 95 institutions.

[2]Percentage of respondents reporting an increase minus percentage reporting a decrease. See methodological comment, p. 34.

[3]Or other comparable student leader.

Student Services

The chief student personnel officer, the editor of the student newspaper, and the president of the student body at each institution in the sample were asked about trends in the availability, frequency of use, and quality of student services. The data on availability are shown in table 20. They indicate quite clearly that student services are expanding. The growth is even more dramatic when measured by frequency of use and quality of service. Clearly, many institutions have managed to expand their student services and there is little indication of retrenchment in this field --though within each category of student services a small percentage of institutions have reported a decrease.

Faculty: Qualifications, Competence, and Performance

The chief academic officer and a senior faculty member at each institution in the sample were asked about trends in the characteristics of faculty. The responses are summarized in table 21. Generally, the number of institutions reporting increases in qualifications, competence, and performance substantially exceeded the number reporting decreases. The responses were mixed, however, as related to loyalty and commitment to the institution and to the percentage of classes taught by full-time faculty. It is worth noting that the responses of the senior faculty members were somewhat less optimistic than those of the chief academic officers.

Instruction: Methods and Quality

Table 22 presents data on trends in methods and quality of instruction. These data are striking because, for every aspect of the educational programs, many institutions report improvements and few report deterioration. Moreover, substantial net increases are reported for costly forms of instruction such as laboratory and studio instruction and independent study. And the strong improvement reported in the overall quality of the learning environment and in the rigor of academic standards is especially impressive. The one feature of table 22 that raises some questions is the reported increase in average class size. In view of the small change in student-faculty ratio (see table 10) it seems doubtful that the increase has been on the average significant.

From the data of table 22 one does not get the impression of widespread retrenchment and curtailment. Rather, the message is that most institutions are holding their own educationally, that many are forging ahead, and only a handful are falling behind. Even those falling behind may be retrogressing in only one or a few characteristics. From table 22 one would never imagine that there has been a depression in the public sector of American higher education. Could it be that the financial squeeze is less severe than is often alleged?

TABLE 20

CHANGES IN AVAILABLE STUDENT SERVICES, 1978-79 TO 1979-80, AS INDEPENDENTLY REPORTED BY STUDENT PERSONNEL OFFICERS AND STUDENTS, ALL TYPES OF INSTITUTIONS COMBINED[1]

	Percentage of Reporting Institutions				
	Increase	No Change	Decrease	Don't Know	Trend Consensus[2]
Career Counseling					
Chief student personnel officer	66%	31%	1%	2%	+65%
Editor of student newspaper	44	38	9	9	+35
President of student body[3]	60	29	6	5	+54
Career Placement					
Chief student personnel officer	48	47	1	4	+47
Editor of student newspaper	39	37	5	19	+34
President of student body[3]	46	34	9	11	+37
Programs for Women					
Chief student personnel officer	43	50	0	7	+43
Editor of student newspaper	50	28	6	16	+44
President of student body[3]	33	42	8	17	+25
Programs for Minorities					
Chief student personnel officer	28	62	6	4	+22
Editor of student newspaper	39	29	8	24	+31
President of student body[3]	26	47	12	15	+14
Psychological Counseling					
Chief student personnel officer	22	61	10	7	+12
Editor of student newspaper	12	53	4	31	+ 8
President of student body[3]	24	38	12	26	+12
Health Services					
Chief student personnel officer	29	56	2	13	+27
Editor of student newspaper	19	52	10	19	+ 9
President of student body[3]	29	53	5	13	+24
Other Services					
Chief student personnel officer	23	22	1	54	+22
Editor of student newspaper	15	16	2	67	+13
President of student body[3]	21	7	2	70	+19

[1]Based on responses from 73 chief student personnel officers, 61 student newspaper editors, and 65 student body presidents, representing 95 institutions.

[2]Percentage of respondents reporting an increase minus percentage reporting a decrease. See methodological comment, p. 34.

[3]Or other comparable student leader.

TABLE 21

CHANGES IN QUALIFICATIONS, COMPETENCE, AND PERFORMANCE OF FACULTY, 1978-79 TO 1979-80, AS INDEPENDENTLY REPORTED BY CHIEF ACADEMIC OFFICERS AND SENIOR FACULTY MEMBERS, ALL TYPES OF INSTITUTIONS COMBINED[1]

	Percentage of Reporting Institutions				
	Increase	No Change	Decrease	Don't Know	Trend Consensus[2]
Concern for Teaching					
Chief academic officer	43%	48%	5%	4%	+38%
Senior faculty member	32	63	5	0	+27
Concern for Advising Students					
Chief academic officer	44	44	6	6	+38
Senior faculty member	43	47	8	2	+35
Willingness to Innovate					
Chief academic officer	44	40	10	6	+34
Senior faculty member	45	48	4	3	+41
Productivity in Research and Scholarship					
Chief academic officer	22	57	3	18	+19
Senior faculty member	29	49	4	18	+25
Loyalty and Commitment to Institution					
Chief academic officer	18	53	19	10	- 1
Senior faculty member	13	50	33	4	-20
General "Quality" of Faculty Performance					
Chief academic officer	41	48	5	6	+36
Senior faculty member	38	56	5	1	+33
Percentage of Faculty with Ph.D. or Equivalent					
Chief academic officer	57	35	1	7	+56
Senior faculty member	39	51	2	8	+37
Percentage of Classes Taught by Full-Time Faculty					
Chief academic officer	21	53	21	5	0
Senior faculty member	21	42	34	3	-13
General Competence of New Additions to Faculty					
Chief academic officer	43	46	3	8	+40
Senior faculty member	31	62	2	5	+29

[1]Based on responses from 69 chief academic officers and 67 senior faculty members, representing 95 institutions.

[2]Percentage of respondents reporting an increase minus percentage reporting a decrease. See methodological comment, p. 34.

TABLE 22

CHANGES IN METHODS AND QUALITY OF INSTRUCTION, 1978-79 TO 1979-80, AS INDEPENDENTLY REPORTED BY ADMINISTRATORS, FACULTY, AND STUDENTS, ALL TYPES OF INSTITUTIONS COMBINED[1]

	Percentage of Reporting Institutions				
	Increase	No Change	Decrease	Don't Know	Trend Consensus[2]
Amount of Laboratory and Studio Instruction					
Chief academic officer	28%	59%	4%	9%	+24%
Chief student personnel officer	31	60	1	8	+30
Senior faculty member	20	70	3	7	+17
Editor of student newspaper	31	51	2	16	+29
President of student body[3]	26	53	6	15	+20
Rigor in Assessing Student Performance					
Chief academic officer	43	41	10	6	+33
Chief student personnel officer	25	53	16	6	+ 9
Senior faculty member	27	61	10	2	+17
Editor of student newspaper	31	34	22	13	+ 9
President of student body[3]	17	52	11	20	+ 6
Innovative Teaching Methods					
Chief academic officer	68	26	3	3	+65
Chief student personnel officer	52	35	8	5	+44
Senior faculty member	65	31	1	3	+64
Editor of student newspaper	54	33	7	6	+47
President of student body[3]	50	38	6	6	+44
Traditional Independent Study					
Chief academic officer	20	59	10	11	+10
Chief student personnel officer	14	74	3	9	+11
Senior faculty member	17	58	5	20	+12
Editor of student newspaper	28	49	13	10	+15
President of student body[3]	22	44	19	15	+ 3
Non-traditional Independent Study					
Chief academic officer	36	56	3	5	+33
Chief student personnel officer	31	57	6	6	+25
Senior faculty member	36	48	7	9	+29
Editor of student newspaper	34	39	8	19	+26
President of student body[3]	34	33	10	23	+24
Experiential Learning					
Chief academic officer	47	41	2	10	+45
Chief student personnel officer	42	51	2	5	+40
Senior faculty member	49	41	3	7	+46
Editor of student newspaper	59	21	3	17	+56
President of student body[3]	50	30	4	16	+46

TABLE 22 (Continued)

	Percentage of Reporting Institutions				
	Increase	No Change	Decrease	Don't Know	Trend Consensus[2]
Average Class Size					
Chief academic officer	40%	47%	10%	3%	+30%
Chief student personnel officer	26	53	14	7	+12
Senior faculty member	40	49	8	3	+32
Editor of student newspaper	35	42	14	9	+21
President of student body[3]	48	27	17	8	+31
Rigor of Academic Standards					
Chief academic officer	42	46	7	5	+35
Chief student personnel officer	20	66	11	3	+ 9
Senior faculty member	39	41	15	5	+24
Editor of student newspaper	21	39	30	10	- 9
President of student body[3]	18	58	12	12	+ 6
Overall Quality of Learning Environment					
Chief academic officer	44	44	6	6	+38
Chief student personnel officer	31	60	3	6	+28
Senior faculty member	33	54	8	5	+25
Editor of student newspaper	42	33	19	6	+23
President of student body[3]	36	39	14	11	+22

[1]Based on responses from 69 chief academic officers, 73 chief student personnel officers, 67 senior faculty members, 61 student newspaper editors, 65 student body presidents, representing 93 institutions.

[2]Percentage of respondents reporting an increase minus percentage reporting a decrease. See methodological comment, p. 34.

[3]Or other comparable student leader.

Analysis by Types of Institutions

The data presented in this chapter were gathered and analyzed by types of institutions. They proved to be so voluminous and repetitious that we decided not to present them in full detail. However, a summary of the "trend consensus" numbers is presented in tables 23 and 24.

Table 23 shows the trend consensus figures for several critical variables as reported by various administrators, faculty members, and students. These permit comparisons of the opinions from the perspectives of different campus personalities. With a few exceptions, they show considerable agreement. However, the senior faculty members seem to be a bit less optimistic than the chief academic officers and the editors of student newspapers appear to see things differently from the other observers.

Table 24 provides "trend consensus" figures, by types of institutions, based on the responses of chief academic officers with respect to a wide range of variables. The most notable feature of this table is the agreement among the chief academic officers in different types of institutions as to what is going on educationally. Significant differences in responses are found only for the following seven of the variables included:

Conscientious work of students
Loyalty to institution
Participation in extracurricular activities
Productivity in research and scholarship
Percentage of classes taught by full-time faculty
Overall quality of learning environment
Grade consciousness

These are of course important variables and the differences in the responses indicate that the public higher educational system is not totally homogeneous.

Having just completed a companion study of independent (private) higher education, it is tempting for the authors to make comparisons between the public and independent sector. Without going into detail, we can say that the responses regarding students, faculty, educational performance in the two sectors seem to us remarkably similar.

General Assessment of Condition by the President

Tables 25 and 26 summarize the responses of the presidents about the recent and future trends in their institutions. Regarding the present academic condition and quality of student services, a majority believe they are "gaining ground," and almost as many believe they are "holding their own," and only a handful believe they are "losing ground" (table 25). But their responses regarding their financial condition were quite different. Only 16 percent thought they were gaining ground, 43 percent that they were holding steady, and 41 percent reported that they were losing ground. Among the comprehensive institutions, a whopping 59 percent, nearly two-thirds, thought they were slipping financially. These figures are drastically different from comparable data for the independent sector where only 8 percent of the presidents reported that they were losing ground financially.

TABLE 23

CHANGES IN THE GENERAL CONTENT AND QUALITY OF EDUCATIONAL PROGRAMS, 1978-79 TO 1979-80, AS MEASURED BY "TREND CONSENSUS"[1] OF REPORTING ADMINISTRATORS, FACULTY, AND STUDENTS[2]

	Research and Doctorate-Granting Universities	Comprehensive Universities and Colleges	Two-Year Colleges	All Types of Institutions Combined
Overall Quality of Learning Environment				
Chief academic officer	0%	+62%	+32%	+38%
Chief student personnel officer	+20	+21	+32	+28
Senior faculty member	+15	+36	+22	+25
Editor of student newspaper	-38	-10	+45	+23
President of student body[3]	+ 8	+33	+19	+22
General Quality of Faculty Performance				
Chief academic officer	+36	+23	+41	+36
Senior faculty member	+ 8	+27	+38	+33
Rigor of Academic Standards				
Chief academic officer	+43	+38	+32	+35
Chief student personnel officer	+27	+ 4	+ 9	+ 9
Senior faculty member	0	0	+37	+24
Editor of student newspaper	-46	-19	0	- 9
President of student body[3]	0	+23	0	+ 6
General Academic Achievement of Students				
Chief academic officer	+36	+ 9	+ 6	+ 9
Chief student personnel officer	+47	0	+15	+14
Senior faculty member	+31	0	- 6	- 2
Editor of student newspaper	- 8	-15	+ 4	- 2
President of student body[3]	+38	+ 4	+29	+23

[1]Percentage of respondents reporting an increase minus percentage reporting a decrease. See methodological comment, p. 34.

[2]Based on responses from 69 chief academic officers, 73 chief student personnel officers, 67 senior faculty members, 61 student newspaper editors, 65 student body presidents, representing 93 institutions.

[3]Or other comparable student leader.

TABLE 24

CHANGES IN INSTITUTIONAL CHARACTERISTICS, 1978-79 TO 1979-80,
AS REPORTED BY CHIEF ACADEMIC OFFICERS[1]
AND AS MEASURED BY "TREND CONSENSUS,"[2] BY TYPES OF INSTITUTIONS

	Research and Doctorate-Granting Universities	Comprehensive Universities and Colleges	Two-Year Colleges	All Types of Institutions Combined
Secondary Preparation of Students				
Reading skills	-29%	-33%	-32%	-32%
Writing skills	-29	-28	-38	-34
Mathematical Skills	-29	-23	-29	-28
Humanistic and Social Studies Preparation	- 8	-19	-17	-16
Science Preparation	0	-24	-18	-18
Student Achievements and Interests				
Conscientious work	+29	- 5	+ 8	+ 7
Orientation toward careers	+93	+76	+59	+66
Orientation toward liberal learning	-57	-43	-41	-43
Grade and credential consciousness	+72	+43	+20	+31
Loyalty to institution	+22	+24	- 3	+ 6
Participation in extracurricular activities	+14	+19	- 5	+ 3
General academic achievement	+36	+ 9	+ 6	+ 9
Interest in contemporary public affairs	0	- 5	-15	-11
Political activism	-43	-24	-17	-21
Use of drugs	-43	-10	-12	-14
Use of alcoholic beverages	+22	+38	+12	+20
Available Student Services[3]				
Career counseling	+47	+63	+68	+65
Career placement	+47	+38	+50	+47
Programs for women	+33	+42	+44	+43
Programs for minorities	+13	+33	+20	+22
Psychological counseling	+27	+20	+ 6	+12
Health Services	+14	+34	+26	+27
Other services	+26	+25	+21	+22

TABLE 24 (Continued)

	Research and Doctorate-Granting Universities	Comprehensive Universities and Colleges	Two-Year Colleges	All Types of Institutions Combined
Qualifications, Competence, and Performance of Faculty				
Concern for teaching	+14%	+23%	+47%	+38%
Concern for advising students	+29	+43	+38	+38
Willingness to innovate	+36	+19	+41	+34
Productivity in research and scholarship	+79	+47	0	+19
Loyalty and commitment to institutions	+ 7	-19	+ 6	- 1
General quality of faculty performance	+36	+23	+41	+36
Percentage of faculty with Ph.D. or equivalent	+64	+52	+56	+56
Percentage of classes taught by full-time faculty	+15	-14	+ 3	0
General competence of new additions to faculty	+64	+43	+35	+40
Changes in Methods and Quality of Instruction				
Amount of laboratory and studio instruction	+ 7	+24	+26	+24
Rigor in assessing student performance	+36	+52	+26	+33
Innovative teaching methods	+71	+62	+65	+65
Traditional independent study	+14	+19	+ 6	+10
Non-traditional independent study	+29	+52	+26	+33
Experiential learning programs	+57	+67	+35	+45
Average class size	+50	+19	+32	+30
Rigor of academic standards	+43	+38	+32	+35
Overall quality of learning environment	0	+62	+32	+38

[1]Based on responses from 69 chief academic officers, 73 chief student personnel officers.

[2]Percentage of respondents reporting an increase minus percentage reporting a decrease. See methodological comment, p. 34.

[3]As reported by chief student personnel officers.

TABLE 25

BROAD GENERAL ASSESSMENTS BY THE PRESIDENTS OF RECENT TRENDS IN THE CONDITION OF THEIR INSTITUTIONS, 1979-80[1]

	Percentage of Reporting Institutions				
	Gaining Ground	Holding Our Own	Losing Ground	Total	Trend Consensus[2]
Financial Condition					
Research and Doctorate-Granting Universities	7%	47%	47%	100%	-40%
Comprehensive Universities and Colleges	5	36	59	100	-55
Two-Year Colleges	21	45	33	100	-12
All Types of Institutions Combined	16	43	41	100	-26
Academic Condition					
Research and Doctorate-Granting Universities	53	40	7	100	+47
Comprehensive Universities and Colleges	48	52	0	100	+48
Two-Year Colleges	52	42	6	100	+45
All Types of Institutions Combined	51	45	5	100	+46
Quality of Student Services					
Research and Doctorate-Granting Universities	27	60	13	100	+13
Comprehensive Universities and Colleges	52	35	13	100	+39
Two-Year Colleges	48	42	9	100	+39
All Types of Institutions Combined	48	42	10	100	+37

[1]Based on 70 responses.

[2]Percentage of institutions gaining ground minus percentage losing ground.

Table 26 summarizes the responses of the presidents about the outlook for the future. As they considered the future, their views became a bit more optimistic. Twelve percent believed their institutions would slip a bit and 1 percent thought their institutions would deteriorate seriously. But among the presidents of the Research and Doctorate-Granting Universities, 33 percent thought their institutions would slip a bit, and among the comprehensive institutions, 4 percent thought their institutions would deteriorate seriously.

The responses of the presidents, as summarized in tables 25 and 26, suggest that for many the financial situation of the recent past has not been wholly favorable, yet that the performance of their institutions has not deteriorated seriously and the future is faced with confidence.

Conclusions

This chapter has been primarily a review of the responses of the participating institutions regarding recent educational changes. The purpose has been to discover changes in the range of programs and in institutional performance that might be a signal of deterioration or distress, of stability, or of progress. The conclusions are as follows:

1. The secondary school preparation of students is not wholly satisfactory and in many institutions is either not improving or getting worse. The outlook as judged by our respondents may be a bit hopeful, however.

2. Regarding the interests and achievements of students, the situation is mixed. Their orientation toward careers, their consciousness of grades and credentials, and their aversion to liberal learning appears to persist. In most other respects the reports were mixed without clear trends. The outlook for the future as judged by our respondents was on the whole more favorable than their opinion of the present.

3. Programs in student services are growing in availability, frequency of use, and quality. There is little sign of retrenchment in this field.

4. As judged by our respondents, the qualifications, competence, and performance of faculty are holding steady or improving in most institutions. Methods and quality of instruction are also improving.

5. The present financial situation and outlook as viewed by the presidents is unsatisfactory in a large proportion of the institutions. However, their view of the future was considerably more favorable than their assessment of the present.

6. Overall, we found little evidence of programmatic retrenchment, many indications of expansion of activities, and many evidences of improved faculties and strengthened programs. But beneath all this was the acknowledgement of the presidents that the financial situation of few institutions is improving and of many is deteriorating. However, with exceptions, there is considerable optimism about the future.

TABLE 26

EXPECTATIONS FOR THE NEXT FIVE YEARS AS EXPRESSED BY THE PRESIDENTS OF REPORTING INSTITUTIONS IN RESPONSE TO THE QUESTION:

"How do you view the outlook for your institution?"

	Research and Doctorate-Granting Universities	Comprehensive Universities and Colleges	Two-Year Colleges	All Types of Institutions Combined
Will improve substantially	17%	26%	33%	30%
Will improve a little	33	57	52	51
No change	17	9	3	6
Will slip a bit	33	4	12	12
Will deteriorate seriously	0	4	0	1
Total	100%	100%	100%	100%

CHAPTER V

OPERATING REVENUES AND EXPENDITURES

The operating revenues and expenditures of colleges and universities are accounted for within what is known as "the current fund." The current fund is the accounting vehicle for financing the regular ongoing operations of institutions. Revenues to the current fund are the monies available to pay for current institutional operations, and expenditures from the current funds are those used to support ongoing instruction, administration, student aid, auxiliary enterprises, etc. Excluded from the current fund are monies for capital purposes (for example, new buildings and major equipment), endowment, and reserves. In this chapter, we present data on current fund revenues and expenditures over the period 1976-77 through 1978-79. These data are exceptionally reliable. They are based on audited financial statements of our sample of 95 institutions. These statements have been revised to meet the guidelines of the American Institute of Certified Public Accountants (AICPA) and the National Association of College and University Business Officers (NACUBO), and have been verified by the reporting institutions themselves.[1]

Current Fund Revenues

The trend of current fund revenues is shown in table 27 by means of index numbers. For all types of public institutions combined, both educational and general revenues and total current revenues increased by 18 percent over the period from 1976-77. During the same period full-time equivalent enrollment held about steady (table 2) and the Consumer Price Index increased from 176.0 to 206.4 or by 17 percent. Thus, revenues just about kept pace with the cost of living.

The several types of institutions, however, fared quite differently. The percentage increases were as follows:

	E & G Revenues	Total Revenues
Research Universities	21%	22%
Doctorate-Granting Universities	20	20
Comprehensive Universities and Colleges	17	17
Two-Year Colleges	10	9

[1] For information on definitions and methodology, see Independent Higher Education, Fourth Annual Report, 1978, pp. 49-50 and Appendix B, pp. I37-44.

TABLE 27

CHANGES IN CURRENT FUND REVENUES
1976-77 TO 1978-79

	Index Numbers: 1976-77 = 100		
	1976-1977	1977-1978	1978-1979
Research Universities			
Tuition and Fees	100	109	118
Federal Government	100	105	116
State Government	100	111	120
Local Government	100	170	190
Private Gifts	100	108	122
Endowment Income	100	110	123
Other E & G Revenues[1]	100	117	144
Sub-total, Educational and General	100	110	121
Auxiliary Enterprises[2]	100	112	122
Total Revenues	100	111	122
Doctorate-Granting Universities			
Tuition and Fees	100	107	111
Federal Government	100	111	127
State Government	100	107	123
Local Government	100	139	92
Private Gifts	100	113	105
Endowment Income	---	---	---
Other E & G Revenues[1]	100	118	133
Sub-total, Educational and General	100	108	120
Auxiliary Enterprises[2]	100	103	112
Total Revenues	100	108	120
Comprehensive Universities and Colleges			
Tuition and Fees	100	106	111
Federal Government	100	101	116
State Government	100	108	119
Local Government	100	98	104
Private Gifts	100	109	118
Endowment Income	---	---	---
Other E & G Revenues[1]	100	133	178
Sub-total, Educational and General	100	107	117
Auxiliary Enterprises[2]	100	104	114
Total Revenues	100	106	117

TABLE 27 (Continued)

	Index Numbers: 1976-77 = 100		
	1976-1977	1977-1978	1978-1979
Two-Year Colleges			
Tuition and Fees	100	104	103
Federal Government	100	104	107
State Government	100	100	118
Local Government	100	94	90
Private Gifts	100	86	122
Endowment Income	---	---	---
Other E & G Revenues[1]	100	144	169
Sub-total, Educational and General	100	101	110
Auxiliary Enterprises[2]	100	96	102
Total Revenues	100	100	109
All Types of Institutions Combined			
Tuition and Fees	100	107	112
Federal Government	100	105	116
State Government	100	107	120
Local Government	100	131	131
Private Gifts	100	105	119
Endowment Income	100	94	108
Other E & G Revenues[1]	100	127	156
Sub-total, Educational and General	100	107	118
Auxiliary Enterprises[2]	100	105	114
Total Revenues	100	107	118

[1]Other E & G Revenues includes departmental sales, services, contributed services and other revenues.

[2]Athletics not included in Auxiliary Revenue but is included in Total Revenues.

Thus, the two groups of universities gained a little on the 17 percent inflation, the comprehensive institutions barely kept pace with inflation, and the two year institutions fell behind seriously.

The same tendencies are depicted more graphically in table 31 which presents figures on revenues per student in constant dollars. This table shows marked differences among the several types of institutions in the percentage change in per student income from tuition and fees and in educational and general revenues as follows:

	Change in Revenues from Tuitions and fees (in constant dollars per student	Change in E & G Revenues (in constant dollars per student
Research Universities	+ 5%	+ 8%
Doctorate-Granting Universities	- 1	+ 7
Comprehensive Universities and Colleges	-14	-10
Two-Year Colleges	- 2	-14
All Types Combined	- 2	+ 3

These figures indicate that a relative decline in tuition income of substantial amount was sustained by the comprehensive institutions and that these losses were only partially offset by increases in state appropriations and other sources. They also indicate that the two-year colleges sustained a serious fall-off in public appropriations per student.

Table 28 shows changes in the relative sources of revenues as expressed in percentage distributions over the years from 1976-77 to 1978-79. For all institutions combined, the changes were miniscule. The changes were small also for the four types of institutions except for the two-year colleges. These institutions appear to be undergoing something of a financial revolution as their support is being shifted from local government to state government. The percentage from local government declined from 19 percent to 16 percent over the short space of two years, while the percentage from the state government increased from 48 percent to 52 percent. By comparison with most past experience, these are substantial changes in the relative sources of revenues for so short a period.

Current Fund Expenditures

The trend of both educational and general expenditures and total expenditures (as shown in table 29) followed closely the trend of revenues (table 27) indicating that collectively the institutions approximately balanced their budgets. However, there were different rates of increase between 1976-77 and 1978-79 for the four types of institutions as follows:

TABLE 28

PERCENTAGE DISTRIBUTION OF CURRENT FUND REVENUES,
1976-77 THROUGH 1978-79

	Percent of Total Revenues		
	1976-1977	1977-1978	1978-1979
Research Universities			
Tuition and Fees	12%	12%	12%
Federal Government	18	17	17
State Government	42	42	41
Local Government	0	1	1
Private Gifts	3	3	3
Endowment Income	1	1	1
Other E & G Revenues[1]	4	5	5
Sub-total, Educational and General	80	79	79
Auxiliary Enterprises	6	6	6
Other[2]	12	13	13
Total Revenues[3]	100%	100%	100%
Doctorate-Granting Universities			
Tuition and Fees	16%	16%	15%
Federal Government	7	7	7
State Government	42	42	43
Local Government	0	0	0
Private Gifts	2	2	2
Endowment Income	0*	0*	0*
Other E & G Revenues[1]	3	3	3
Sub-total, Educational and General	70	70	70
Auxiliary Enterprises	15	15	14
Other[2]	14	14	15
Total Revenues[3]	100%	100%	100%
Comprehensive Universities and Colleges			
Tuition and Fees	17%	17%	16%
Federal Government	6	6	6
State Government	53	54	54
Local Government	6	5	5
Private Gifts	1	1	1
Endowment Income	0*	0*	0*
Other E & G Revenues[1]	2	2	2
Sub-total, Educational and General	84	85	85
Auxiliary Enterprises	15	15	15
Other[2]	0	0	0
Total Revenues[3]	100%	100%	100%

TABLE 28 (Continued)

	Percent of Total Revenues		
	1976-1977	1977-1978	1978-1979
Two-Year Colleges			
Tuition and Fees	17%	17%	16%
Federal Government	7	7	7
State Government	48	48	52
Local Government	19	18	16
Private Gifts	1	1	1
Endowment Income	0*	0*	0*
Other E & G Revenues[1]	2	3	3
Sub-total, Educational and General	94	94	94
Auxiliary Enterprises	6	6	6
Other[2]	0	0	0
Total Revenues[3]	100%	100%	100%
All Types of Institutions Combined			
Tuition and Fees	15%	15%	14%
Federal Government	11	11	11
State Government	46	46	47
Local Government	5	5	5
Private Gifts	2	2	2
Endowment Income	0*	0*	0*
Other E & G Revenues[1]	3	4	4
Sub-total, Educational and General	82	82	82
Auxiliary Enterprises	10	10	10
Other[2]	7	7	7
Total Revenues[3]	100%	100%	100%

[1]Departmental sales and services, contributed services and other revenues.

[2]Hospitals and independent operations.

[3]Athletics not included in Auxiliary Revenue but is included in Other Revenues.

*Less than one-half of one percent.

	Increase in Educational and General		Increase in Total	
	Revenues	Expenditures	Revenues	Expenditures
Research Universities	21%	20%	22%	21%
Doctorate-Granting Universities	20	20	20	20
Comprehensive Universities and Colleges	17	19	17	19
Two-Year Colleges	10	10	9	10
All Types Combined	18	18	18	18

Collectively, the budgets of the Research Universities appeared to have had a slight surplus, of the doctorate-granting institutions to have been barely in balance, of the comprehensive institutions to have sustained a substantial deficit, and the Two-Year Colleges to have experienced a slight deficit. In the case of public institutions, one cannot be sure that the apparent surpluses or deficits (that is, the net balances between revenues and expenditures) are genuine and not merely a reflection of unique funding and accounting arrangements of the various state governments.

Another tendency that shows up in the data on expenditures (table 29) is that growth of expenditures for instruction has been substantially less than the growth in total educational and general expenditures. The data (taken from table 29) are as follows:

	Increase in Expenditures for Instruction	Increase in Total E & G Expenditures
Research Universities	15%	20%
Doctorate-Granting Universities	15	20
Comprehensive Universities and Colleges	15	19
Two-Year Colleges	7	10
All Types Combined	13	18

The same tendency appears in tables 30 and 31 which show the percentage distribution of educational and general expenditures. For each of the four types of institutions the percentage of expenditures devoted to instruction has been slowly but steadily declining.

The import of these figures is that, under conditions of financial stringency, the institutions have been meeting the rising costs of institutional support (administration), plant operation, etc., by relative shifts of funds out of instruction. This shift has been achieved primarily by holding down salary increases. Actually, though the figures presented here do not show it, the proportion of funds spent on instruction has been declining over many years. We regard this as a disquieting tendency. On the one hand it is an indication of financial stringency; on the other hand it may be an indication of misplaced priorities, many of which may have been forced on institutions by the pressures of outside economic and political influences.

TABLE 29

CHANGES IN CURRENT FUND EXPENDITURES,
1976-77 THROUGH 1978-79

	Index Numbers: 1976-77 = 100		
	1976-1977	1977-1978	1978-1979
Research Universities			
Instruction	100	107	115
Research	100	106	119
Public service	100	109	124
Academic support	100	122	142
Student services	100	116	124
Institutional support	100	117	129
Plant operation and maintenance	100	112	122
Sub-total, Educational and General	100	109	120
Auxiliary Enterprises	100	111	121
Total Expenditures[1]	100	110	121
Doctorate-Granting Universities			
Instruction	100	108	115
Research	100	115	105
Public service	100	139	185
Academic support	100	111	124
Student services	100	105	112
Institutional support	100	123	143
Plant operation and maintenance	100	114	132
Sub-total, Educational and General	100	111	120
Auxiliary Enterprises	100	111	115
Total Expenditures[1]	100	111	120
Comprehensive Universities and Colleges			
Instruction	100	106	115
Research	100	107	102
Public service	100	114	167
Academic support	100	118	130
Student services	100	116	136
Institutional support	100	110	134
Plant operation and maintenance	100	107	106
Sub-total, Educational and General	100	108	119
Auxiliary Enterprises	100	109	114
Total Expenditures[1]	100	108	119

TABLE 29 (Continued)

	Index Numbers: 1976-77 = 100		
	1976-1977	1977-1978	1978-1979
Two-Year Colleges			
Instruction	100	100	107
Research	100	74	38
Public service	100	82	69
Academic support	100	115	122
Student services	100	105	113
Institutional support	100	109	115
Plant operation and maintenance	100	107	116
Sub-total, Educational and General	100	102	110
Auxiliary Enterprises	100	105	106
Total Expenditures[1]	100	103	110
All Types of Institutions Combined			
Instruction	100	105	113
Research	100	97	94
Public service	100	108	130
Academic support	100	118	132
Student services	100	112	123
Institutional support	100	113	129
Plant operation and maintenance	100	110	118
Sub-total, Educational and General	100	107	118
Auxiliary Enterprises	100	108	115
Total Expenditures[1]	100	108	118

[1]Includes mandatory transfers.

TABLE 30

PERCENTAGE DISTRIBUTION OF SELECTED EDUCATIONAL AND GENERAL EXPENDITURES, 1976-77 THROUGH 1978-79

	Percent of Selected E & G Expenditures		
	1976-77	1977-78	1978-79
Research Universities			
Instruction	44%	43%	42%
Research	22	22	22
Public service	5	5	6
Academic support	10	11	11
Student services	4	4	4
Institutional support	7	7	7
Plant operation and maintenance	8	8	8
Total Educational and General[1]	100%	100%	100%
Doctorate-Granting Universities			
Instruction	54%	53%	52%
Research	6	5	5
Public service	1	1	2
Academic support	13	13	13
Student services	6	6	5
Institutional support	9	10	11
Plant operation and maintenance	11	12	12
Total Educational and General[1]	100%	100%	100%
Comprehensive Universities and Colleges			
Instruction	57	56	55
Research	1	1	1
Public service	2	2	3
Academic support	9	10	10
Student services	7	7	8
Institutional support	12	12	14
Plant operation and maintenance	12	12	11
Total Educational and General[1]	100%	100%	100%
Two-Year Colleges			
Instruction	58%	56%	56%
Research	0	0	0
Public service	1	1	1
Academic support	8	9	9
Student services	9	9	9
Institutional support	13	14	14
Plant operation and maintenance	11	12	12
Total Educational and General[1]	100%	100%	100%

TABLE 30 (Continued)

	Percent of Selected E & G Expenditures		
	1976-77	1977-78	1978-79
All Types of Institutions Combined			
Instruction	52%	51%	50%
Research	10	10	10
Public service	3	3	4
Academic support	10	11	11
Student services	6	6	6
Institutional support	10	10	11
Plant operation and maintenance	10	10	10
Total Educational and General[1]	100%	100%	100%

[1]Excludes mandatory transfers and scholarships and fellowships.

TABLE 31

CHANGE IN SELECTED CURRENT FUND REVENUES AND EXPENDITURES, PER STUDENT, CONSTANT DOLLARS, 1976-77 THROUGH 1978-79

		Index Numbers: 1976-77 - 100		
		1976-77	1977-78	1978-79
Research Universities				
Revenues:	Tuition and Fees	100	104	105
	Educational and General	100	105	108
	Total Revenue	100	105	109
Expenditures:	Instruction	100	102	103
	Research	100	101	107
	Educational and General	100	104	107
	Total Expenditure	100	104	108
Doctorate-Granting Universities				
Revenues:	Tuition and Fees	100	101	99
	Educational and General	100	103	108
	Total Revenue	100	102	107
Expenditures:	Instruction	100	101	103
	Research	100	87	94
	Educational and General	100	103	107
	Total Expenditure	100	102	107
Comprehensive Universities and Colleges				
Revenues:	Tuition and Fees	100	104	100
	Educational and General	100	104	109
	Total Revenue	100	104	109
Expenditures:	Instruction	100	104	107
	Research	100	104	95
	Educational and General	100	105	110
	Total Expenditure	100	105	110
Two-Year Colleges				
Revenues:	Tuition and Fees	100	99	99
	Educational and General	100	96	106
	Total Revenue	100	96	105
Expenditures:	Instruction	100	96	103
	Research	100	70	36
	Educational and General	100	98	106
	Total Expenditure	100	98	106
All Types of Institutions Combined				
Revenues:	Tuition and Fees	100	103	103
	Educational and General	100	102	107
	Total Revenue	100	103	108
Expenditures:	Instruction	100	101	104
	Research	100	93	81
	Educational and General	100	103	108
	Total Expenditure	100	103	108

Table 30 is of interest in that it shows the differences among the four types of institutions in the way they allocate their resources among various functions. Except for the obvious fact that Research Universities devote a relatively high proportion of their resources to research and public service, the allocations among the several types of institutions are quite similar.

Conclusions

From the analysis of current fund revenues and expenditures, some tentative conclusions about the financial position and progress of public higher education may be drawn.

1. During the period 1977-78 through 1979-80, current revenues of the public sector and also educational and general revenues just about kept pace with the Consumer Price Index which rose 17 percent. However, the revenues of the research and doctorate-granting institutions gained on the cost of living, those of comprehensive institutions kept even with it, and the revenues of the two-year colleges fell seriously behind.

2. Some important shifts in the sources of revenues appear to have taken place. When revenues are measured in constant dollars per student, it appears that the amount of tuitions and fees collected by the comprehensive institutions have declined sharply and the loss has only partially been made up by public appropriations. On the same basis, the two-year colleges have lost substantial revenue from public appropriations.

3. The two-year colleges appear to be undergoing a shift in the sources of their revenue. From year to year they have been receiving relatively less from local government and relatively more from state government.

4. Collectively the public institutions achieved balanced budgets over the years 1976-77 through 1978-79. However, research universities achieved a surplus and the comprehensive and two-year colleges sustained deficits.

5. The growth of expenditures for instruction has been slower than the growth for other functions, and instruction therefore has received a steadily declining proportion of the budget. This tendency has been common to all four types of institutions.

6. The financial situation as revealed in current revenues and expenditures as of 1978-79 was clearly stringent, considerably more so for the comprehensive and two-year institutions than for the universities. As shown in the preceding chapters, the stringency has not seriously undermined the capacity of the institutions to perform their missions, but it has probably taken its toll in deferred maintenance of plant and inadequate increases in employee compensation.

CHAPTER VI

UNDERGRADUATE STUDENT FINANCIAL AID

A major factor in the staying power of the public sector of American higher education has been the growth of funds for student financial aid. Enrollments--though not the sole source of revenue--are the financial foundation of both public and independent colleges and universities. Enrollments bring with them both tuitions and appropriations for the public institutions and relatively high tuitions for the independent institutions. Enrollments are strongly influenced by aid to students, and the finances of institutions are greatly improved to the extent that this aid can be derived from outside sources rather than being a drain on institutional funds.

We have examined in detail the flow of funds from major sources of student financial assistance--both inside and outside. Over the years we hope to be able to show trends in the sources and types of funds. For the present, we have been able to obtain continuous data only for the two years 1977-78 and 1978-79.

Student aid comes in a great variety of forms and from many sources. The following is a list of the principal types of aid together with the names or acronyms by which they are known:

Grants:	aid for which no work or repayment is expected.
Work-study:	aid for which the student is expected to exchange labor.
Loans:	aid, usually at preferred interest rates, which the student is expected to repay.
State Aid:	grants awarded or funded by a state.
BEOG:	Basic Educational Opportunity Grant, a federal grant program.
SEOG:	Supplemental Educational Opportunity Grant, a federal program providing campus-based student aid with awards determined by the institution.
LEEP:	Law Enforcement Education Program, a federal program.
Unrestricted funds:	student aid expenditures from unrestricted general funds of institutions.

CWSP:	College Work-Study Program of which up to 80 percent is financed by the federal government and at least 20 percent by institutional or other matching funds.
Student payroll:	students employed by the institution.
NDSL:	National Direct Student Loans, 89 percent financed by the federal government and 11 percent by institutional matching funds.
FISL/GSL:	Federally Insured Student Loans, and Guaranteed Student Loans, federal programs insuring money loaned by other lenders.

The Data

The data are presented in four tables, 32-36, and are expressed as medians. For example, in table 32 the percentage distributions refer to median institutions. Therefore, the percentage distributions do not necessarily add to 100 percent.

Table 32 describes the sources of student aid funds as reported by the institutions. These data are probably incomplete because institutions do not have information on all the sources of aid received by their students, particularly for those students who do not apply for aid from or through the institutions. To the extent that the table covers the situation, it indicates that about 15 percent of student aid was derived from institutional funds, 10 percent from the states, and 69 percent from federal sources. The pattern for the research and doctorate-granting universities was somewhat different, however, in that contributions from their own institutional funds were about a quarter of the total. The main generalization from table 32 is that the great bulk of student aid funds for the public institutions came from public funds, mainly from the federal government.

Table 33 shows the distribution of the same funds by type of student aid program. For all types of institutions combined, about two-thirds were in the form of grants to students, 13 percent were loans, and 19 percent work-study or jobs provided by the institution. In the research and doctorate-granting universities, students received relatively large amounts of loans and small amounts of work; students of the comprehensive institutions received relatively small amounts of aid in the form of grants and more in the form of employment; students in the two-year colleges received relatively small amounts in loans and large amounts in grants.

Table 34 provides considerable information on amounts of student aid and on trends in these amounts over the past two years. As the table shows, total student aid is equal to 11 percent of total Educational and General Expenditures of the institutions and that student aid which is derived from non-institutional funds equals 9 percent of the E & G expenditures. About 34 percent of all students are recipients of some student aid and the average award from all sources combined is $881 which amounts to 32 percent of the average student budget. These numbers give some indication of the magnitude of student aid.

The importance of student aid, of course, is that it helps the institutions to recruit and retain students who pay tuitions, fees, board, and room and that it also attracts state and local appropriations which are commonly based on enrollments.

Conclusions

The dramatic development of student aid over recent decades has had a profound impact on all of American higher education. The decision of the federal government to enter the field in a big way has resulted in a massive flow of federal funds to the institutions via students. However, not all the federal dollars spent on student aid flow to the colleges and universities in the form of tuitions, fees, or board and room. Some of them are spent by students for transportation, books and supplies, off-campus board and room, and other personal expenses including recreation. Moreover, with the termination of veterans' programs of aid, growth of the total aid program has been slowed. As shown in table 34, federal aid declined both in total dollars of aid and in number of recipients. Nevertheless, the federal programs have given the institutions relief from expenditures for student aid from their own funds. The program overall has been favorable to the financial progress of the institutions.

Our data on trends in student aid were limited to the years 1977-78 and 1978-79. In subsequent studies, we expect to accumulate longitudinal series covering more years.

TABLE 32

PERCENTAGE DISTRIBUTION OF UNDERGRADUATE STUDENT AID DOLLARS[1] BY SOURCES, MEDIAN INSTITUTIONS, 1978-79

	Research and Doctorate-Granting Universities	Comprehensive Universities and Colleges	Two-Year Colleges	All Types of Institutions Combined
Institutional Funds				
Restricted endowment income and current gifts[2]	3%	1%	1%	2%
Unrestricted funds[3]	21	11	9	13
Sub-total[4]	25	12	10	15
Funds of state and local governments	14	11	6	10
Federal funds				
BEOG	26	36	46	38
SEOG	3	3	4	4
Other[5]	25	32	26	27
Sub-total[4]	54	71	76	69
Grand total[6]	100%	100%	100%	100%

[1]All funds known to the institutions--grants, loans, and work from all sources.

[2]Funds restricted to student aid.

[3]Rough approximation. Includes grants, CWSP, student employment on regular payroll, and loans. This figure was computed as a residual by subtracting the restricted funds from the sub-total. In view of the fact that the data are medians, this procedure would not produce an accurate figure.

[4]Based on direct information from the institutions. Not computed by adding the components.

[5]Includes federal share of CWSP and NDSL contributions and all other federal programs of grants, work, or loans. Computed as a residual and therefore an approximation.

[6]Because the data are medians, the components do not necessarily add to 100.

TABLE 33

PERCENTAGE DISTRIBUTION OF UNDERGRADUATE STUDENT AID DOLLARS[1]
BY TYPE OF AID PROGRAM, MEDIAN INSTITUTIONS, 1978-79

	Research and Doctorate-Granting Universities	Comprehensive Universities and Colleges	Two-Year Colleges	All Types of Institutions Combined
Grants to students	61%	59%	72%	65%
Loans to students	21	16	5	13
Student employment	11	24	21	19
Total[2]	100%	100%	100%	100%

[1]All funds known to the institutions--grants, loans, and work from all sources.

[2]Components are medians and do not necessarily add to 100.

TABLE 34

INDICATORS OF AMOUNTS OF STUDENT FINANCIAL AID IN 1978-79 AND OF TRENDS IN THESE AMOUNTS OVER THE PERIOD 1977-78 TO 1978-79

	Student Aid as Percentage of E and G[1] Expenditures 1978-79	Student Aid Recipients as Percentage of All Students 1978-79[2]	Average Award per Recipient 1978-79	Average Award as Percentage of Average Student Budget	Percentage Change: 1977-78 to 1978-79		
					in Total Student Aid	in Number of Recipients	in Average Award
By Source							
Institutional Funds	2%	18%	$ 222	8%	4%	2%	4%
State government	1	6	377	14	5	2	6
Federal government	7	29	653	21	-2	-5	2
Total[3]	11	34[3]	881[3]	32[3]	0[3]	4[3]	0[3]
By Type of Program							
Grants	7	30	557	21	0	-2	1
Loans	1	6	529	16	-3	-2	-4
Student employment	2	8	688	21	6	3	4
Total[3]	11	34[3]	881[3]	32[3]	0[3]	4[3]	0[3]

[1]E and G refers to Educational and General, current expenditures exclusive of auxiliary enterprises, hospitals, etc.

[2]Head count.

[3]Totals refer to unduplicated recipients.

CHAPTER VII

LIABILITIES AND NET REVENUES

In our studies of the independent (private) sector of higher education we have been able to include in our financial analysis audited balance sheets revealing changes over time in assets, liabilities, and fund balances (net worth). Moreover, it has been possible to standardize the balance sheet data for ready comparisons over time and among institutions. In the case of the public sector, it has not been possible to obtain similar balance sheet data because of variations among the states in accounting practices. Indeed, in some states the public colleges and universities are, for accounting purposes, simply branches of the state or local government. In other states they are virtually independent entities, almost like private colleges toward which the state or local government functions in the role of philanthropic donor.

Also, balance sheets--in which assets and liabilities are matched against one another and net worth is computed--are not as relevant for public colleges and universities as for private institutions. The ability of public institutions to provide excellent education or to survive does not necessarily depend on their ability, as separate entities, to meet their obligations. They have the backing of state or local government and there is usually no question of the ability of public bodies, if so disposed, to meet the obligations of their public colleges and universities. When sponsoring public authorities themselves get into financial difficulty, as in the case for example of New York City, then the question of ability of public colleges and universities to dispense excellent education or even to survive depends on the financial ability and willingness of the sponsoring public body, not solely on the financial position of the institution. Ultimately, the finances and survival of public institutions are matters more of conscious political decision than of financial ability as measured by institutional assets, liabilities, and net worth.

For all these reasons we did not and could not obtain or construct balance sheets for the sample of public institutions but rather concentrated on trends in liabilities or debt as indicators of the extent to which future revenues are mortgaged. We present three tables, 35, 36, and 37, showing the amounts and the trend of liabilities over the years 1974-75 through 1978-79.

Table 35 shows the average dollar amount of debt for the various types of public institutions in 1978-79. As these figures indicate, public institutions do incur substantial debt. By far the largest single item is plant liabilities, incurred mainly for construction of residence halls and other self-liquidating auxiliary enterprises. The soundness of this indebtedness is dependent on the amount of future income likely to be generated by the auxiliary enterprises which amount depends in large part on future

enrollments and on the inclination of students to use college-owned housing and other auxiliary facilities. Both are uncertain, though in recent years there has been a substantial return of students to college-owned residence halls. Moreover, as will be shown later, the amount of plant debt has been declining.

The kinds of debt that may indicate financial weakness are "other short-term" and "other long-term" debt and "interfund borrowing." The comprehensive universities appear to have much more of these kinds of debt, in relation to their size, than the other types of institutions. Their short-term plant liabilities also seem to be relatively high. These may be indicators of relative financial weakness among the comprehensive institutions.

Table 36 presents index numbers showing the trend of liabilities over the period 1974-75 to 1978-79. In interpreting these figures, it is useful to note that over the same period the Consumer Price Index increased by about 34 percent and enrollments in the several types of institutions grew as follows:

Universities	2.6%
Other Four-Year Institutions	5.7
Two-Year Institutions	17.7
All Types Combined	9.9

For all types of institutions combined, total liabilities increased by only 8 percent from 1974-75 to 1978-79, much less than the Consumer Price Index and enrollment. Clearly, the overall burden of debt--in constant dollars and relative to enrollment--declined substantially in this period.

There were some differences, however, among the four types of institutions. Total indebtedness increased by 21 percent for the research universities and 16 percent for the doctorate-granting institutions but declined slightly for the comprehensive institutions and the two-year colleges. But the burden of total debt decreased for all in the sense that the increase in indebtedness was less than the rise in the Consumer Price Index and in enrollment.

Plant liabilities increased moderately or not at all for all types of institutions except the comprehensive institutions which experienced a spectacular increase in short-term plant liabilities. Other short-term liabilities increased for all four types of institutions. The rise was especially steep in the case of the doctorate-granting universities and the two-year colleges. The trend of interfund borrowing was mixed--up for the doctorate-granting and comprehensive institutions and down for the others.

The ups and downs for the different groups and for different types of debt are hard to explain. However, the volatile items--short-term plant liabilities, other short-term liabilities, and interfund borrowing--are all relatively small in amount as shown in table 35. Our judgment is that the trends in liabilities are on the whole not particularly disturbing and that the weight of debt, relative to annual income or to assets or to the rate of inflation, is not excessive.

TABLE 35

AVERAGE DOLLAR LIABILITIES OF PUBLIC INSTITUTIONS, 1978-79
(000 omitted)

	Research Universities	Doctorate-Granting Universities	Comprehensive Universities and Colleges	Two-Year Colleges	All Types of Institutions Combined
Plant Liabilities					
Short-term debt	$ 3,288	$ 1,553	$ 3,170	$ 345	$ 2,426
Long-term debt	55,440	40,133	12,114	2,638	30,649
Other External Liabilities					
Deposits and deferred credits[1]	9,578	2,450	763	232	4,201
Other short-term debt	9,922	3,513	1,941	824	4,938
Long-term debt	0	0	2,726	39	782
Interfund Borrowing	1,484	1,390	5,664	176	2,404
Total Liabilities	$79,711	$49,039	$26,378	$4,254	$45,400

[1]Includes agency.

TABLE 36

TRENDS IN LIABILITIES, 1974-75 THROUGH 1978-79
(Index Numbers: 1974-75 = 100)

	1974-1975	1975-1976	1976-1977	1977-1978	1978-1979
Research Universities					
Plant Liabilities					
Short-term debt	100	119	106	121	132
Long-term debt	100	103	106	108	116
Other External Liabilities					
Deposits and Deferred Credits[1]	100	106	112	139	144
Other short-term debt	100	116	120	134	139
Long-term debt[2]	100	100	100	100	100
Interfund Borrowing	100	63	61	108	82
Total Liabilities	100	104	107	115	121
Doctorate-Granting Universities					
Plant Liabilities					
Short-term debt	100	94	141	237	108
Long-term debt	100	98	93	110	111
Other External Liabilities					
Deposits and Deferred Credits[1]	100	97	108	119	163
Other short-term debt	100	83	122	132	171
Long-term debt[2]	100	100	100	100	100
Interfund Borrowing	100	124	136	132	175
Total Liabilities	100	97	98	116	116

TABLE 36 (Continued)

	1974-1975	1975-1976	1976-1977	1977-1978	1978-1979
Comprehensive Universities and Colleges					
Plant Liabilities					
Short-term debt	100	125	135	180	332
Long-term debt	100	96	91	88	72
Other External Liabilities					
Deposits and Deferred Credits[1]	100	87	122	143	186
Other short-term debt	100	112	139	137	128
Long-term debt	100	84	68	54	100
Interfund Borrowing	100	88	87	113	123
Total Liabilities	100	95	92	96	97
Two-Year Colleges					
Plant Liabilities					
Short-term debt	100	94	76	83	101
Long-term debt	100	92	85	84	78
Other External Liabilities					
Deposits and Deferred Credits[1]	100	108	102	109	104
Other short-term debt	100	123	155	175	196
Long-term debt	100	92	84	76	68
Interfund Borrowing	100	91	76	52	66
Total Liabilities	100	96	91	92	90

TABLE 36 (Continued)

	1974-1975	1975-1976	1976-1977	1977-1978	1978-1979
All Types of Institutions Combined					
Plant Liabilities					
Short-term debt	100	112	114	148	179
Long-term debt	100	98	96	98	95
Other External Liabilities					
Deposits and Deferred Credits[1]	100	100	112	131	151
Other short-term debt	100	112	133	143	152
Long-term debt	100	94	88	82	94
Interfund Borrowing	100	85	82	102	105
Total Liabilities	100	99	98	105	108

[1]Includes agency.

[2]Other long-term debt was zero throughout the period.

Borrowing is the customary mode of financing auxiliary enterprises and state governments generally expect the operations of these enterprises to be self-liquidating and to function without substantial public appropriations. Moreover, borrowing is necessary in most large organizations to meet emergencies and to bridge seasonal changes in income and expenditure. We do not see in the figures presented in table 36 a pattern of rising or unsustainable debt. There may be individual institutions, however, for which excessive debt is either the result or a cause of financial distress. A potential problem for many institutions is that a decline in enrollment might reduce the occupancy of residence halls and the patronage of other subsidiary enterprises and thus reduce the revenues available to amortize debt. The effect on institutions of such circumstances would depend on the willingness, or degree of obligation, on the part of the sponsoring states or local authorities to take over the obligations. If institutions were expected to make up such deficits out of regular operating appropriations and tuitions, their financial situation might indeed become desperate.

Table 37 shows the distribution of liabilities by types of indebtedness over the period 1974-75 to 1978-79. Generally, for all types of institutions combined, the percentages were fairly stable. The data do show, however, an upward trend in the percentage of short-term debt of various types and a downward trend in the percentage of various kinds of long-term debt. The relative advantages of short-term and long-term debt depend on the structure of interest rates and on the expected timing of the flow of funds to repay the obligations. One cannot be sure that these changes in the relative amounts of short-term debt have any significance. Overall, the data do not suggest that there are serious problems of indebtedness. But the spectacular relative increases in "other short-term debt" for the doctorate-granting universities and two-year colleges and in short-term plant liabilities for comprehensive institutions suggest that at least a few of the component institutions may be in some kind of difficulty. Our analysis of the institutions individually may bring these cases to light.

For reasons already mentioned, we were unable to obtain balance sheets for the public institutions. Therefore, we could not present the various ratios of assets, liabilities, and net worth that are common in analyzing the financial position of private institutions. We were, however, able to provide data on the ratios of net revenue to total revenue.

Net revenue refers to the revenue left over after all expenses have been paid. It is comparable to net profit from operations in a profit-making enterprise. In a not-for-profit college or university, it is a source of additional reserves. The ratio of net revenues to total revenues in public institutions is affected by the practice in some states and localities of reclaiming unspent revenues. The data on net revenues expressed as a percentage of total revenues are shown in table 38 for Educational and General Revenues, Auxiliary Revenues, and total revenues. Net revenues in 1978-79 were substantial for the median research university, and either negative or zero for the other types of institutions. The trend over the years from 1976-77 was rising for the research universities and either falling or unchanging for the other types of institutions. To the extent that net revenues are a reliable indicator, and they cannot be wholly dismissed, they suggest budgetary problems among the median institutions of all types except the research universities.

TABLE 37

PERCENTAGE DISTRIBUTION OF LIABILITIES, 1974-75 THROUGH 1978-79

	1974-1975	1975-1976	1976-1977	1977-1978	1978-1979
Research Universities					
Plant Liabilities					
Short-term debt	4%	4%	4%	4%	4%
Long-term debt	73	72	72	69	70
Other External Liabilities					
Deposits and Deferred Credits[1]	10	10	10	12	12
Other short-term debt	11	12	12	13	12
Long-term debt	0	0	0	0	0
Interfund Borrowing	3	2	2	3	2
Total Liabilities	100	100	100	100	100
Doctorate-Granting Universities					
Plant Liabilities					
Short-term debt	3	3	5	7	3
Long-term debt	86	87	82	82	82
Other External Liabilities					
Deposits and Deferred Credits[1]	4	4	4	4	5
Other short-term debt	5	4	6	6	7
Long-term debt	0	0	0	0	0
Interfund Borrowing	2	2	3	2	3
Total Liabilities	100	100	100	100	100

TABLE 37 (Continued)

	1974-1975	1975-1976	1976-1977	1977-1978	1978-1979
Comprehensive Universities and Colleges					
Plant Liabilities					
Short-term debt	4%	5%	5%	7%	12%
Long-term debt	62	63	61	57	46
Other External Liabilities					
Deposits and Deferred Credits[1]	2	1	2	2	3
Other short-term debt	6	7	8	8	7
Long-term debt	10	9	7	6	10
Interfund Borrowing	17	16	16	20	21
Total Liabilities	100	100	100	100	100
Two-Year Colleges					
Plant Liabilities					
Short-term debt	7	7	6	7	8
Long-term debt	72	70	68	66	62
Other External Liabilities					
Deposits and Deferred Credits[1]	5	5	5	6	5
Other short-term debt	9	11	15	17	19
Long-term debt	1	1	1	1	1
Interfund Borrowing	6	5	5	3	4
Total Liabilities	100	100	100	100	100

TABLE 37 (Continued)

	1974-1975	1975-1976	1976-1977	1977-1978	1978-1979
All Types of Institutions Combined					
Plant Liabilities					
Short-term debt	4%	5%	5%	6%	7%
Long-term debt	72	71	70	67	63
Other External Liabilities					
Deposits and Deferred Credits[1]	6	6	6	7	7
Other short-term debt	8	9	11	11	12
Long-term debt	3	3	2	2	3
Interfund Borrowing	7	6	6	8	8
Total Liabilities	100	100	100	100	100

[1]Includes agency.

TABLE 38

NET REVENUES AS PERCENTAGE OF TOTAL REVENUE, MEDIAN INSTITUTIONS,[1] 1976-77 THROUGH 1978-79

	1976-1977	1977-1978	1978-1979
Research Universities			
Educational and General	2.7%	3.5%	3.2%
Auxiliary enterprises	2.6	4.1	4.0
All revenues	2.1	4.7	5.3
Doctorate-Granting Universities			
Educational and General	0.4	1.1	1.0
Auxiliary enterprises	2.7	2.4	2.4
All revenues	2.9	0.3	-2.6
Comprehensive Universities and Colleges			
Educational and General	1.4	1.0	0.4
Auxiliary enterprises	2.9	1.3	2.4
All revenues	0.0	-0.6	-2.9
Two-Year Colleges			
Educational and General	2.0	1.9	2.8
Auxiliary enterprises	2.6	1.9	3.3
All revenues	0.0	0.0	0.0
All Types of Institutions Combined			
Educational and General	1.3	1.7	2.1
Auxiliary enterprises	2.6	1.9	3.1
All revenues	0.2	0.1	-0.6

[1]Each figure in this table represents a median that is separately calculated for the particular category of Net Revenue and for the particular year.

Conclusions

The conclusions from the study of liabilities are as follows:

1. Overall, the burden of debt relative to the general price level and the size of the institutions has been declining somewhat.

2. Short-term debt has been increasing and long-term debt decreasing as percentages of the total.

3. The trend of indebtedness for different types of institutions and for different types of liabilities has been erratic. Noteworthy have been the large increases in particular kinds of short-term debt in the case of the doctorate-granting, comprehensive, and two-year institutions.

4. The ultimate responsibility for the debt of public institutions rests with their sponsoring states or local governments, and depends on both the ability and willingness of these public bodies to stand back of their institutions. A grave danger to public colleges and universities is that in case the institutions are unable to amortize the plant debt from the income of auxiliary enterprises, the responsible public body will expect them to meet the obligations from ordinary operating funds.

5. The budgetary situation as reflected in the ratio of net revenues to total revenues was somewhat unfavorable in all types of institutions except the research universities.

CHAPTER VIII

ANALYSIS OF THE RELATIVE FINANCIAL CONDITION OF INSTITUTIONS INDIVIDUALLY

The previous sections of this report described the condition of the public sector as a whole or of sub-groups within the public sector. The information presented was in the form of consolidated totals or medians describing trends in the position of groups of institutions. These data did not reveal the considerable variability among institutions. In this chapter, we report on our assessment of the data for the sample institutions individually.

The method was to classify the institutions by their estimated financial strength in 1977-78 and to classify them also by the change in their strength over the two years 1977-78 and 1978-79. For these purposes the following data were used:

Item	Characteristic Measured
Total Educational and General Expenditures	Critical mass
Total Educational and General Expenditures per full-time equivalent student	Adequacy of revenue
Net income as percentage of total revenue	Budgetary surplus or deficit

The classifications of the institutions were made by the authors on a judgmental basis. The results are shown in table 39. For example, for all types of institutions combined, the left-hand figures show that in 1977-78, 24 percent of the institutions were judged to be strong, 36 percent medium, and 40 percent weak. Similar figures for 1978-79 were 21, 39, and 40. Thus, there was a slight deterioration as 3 percent of the institutions moved from strong to medium. Reading across the bottom row of the table, one notes that 21 percent of the institutions were gaining ground in 1977-78 and 30 percent in 1978-79. At the same time, 21 percent were losing ground in 1977-78 and 32 percent in 1978-79. Thus, the number holding steady decreased from 57 to 39. The remainder of the figures for all institutions combined show the cross-classification expressing the current position of the institutions and the direction in which they were heading. For example, 12 percent of the institutions were strong and gaining ground in 1977-78 as compared

TABLE 39

PERCENTAGE OF INSTITUTIONS, BY ESTIMATED CONDITION IN 1977-78 AND BY CHANGE IN CONDITION BETWEEN 1977-78 AND 1978-79

Type of Institution and Condition in 1977-78	Estimated Recent Trend in Condition: Gaining Ground 1977-78	Gaining Ground 1978-79	Holding Steady 1977-78	Holding Steady 1978-79	Losing Ground 1977-78	Losing Ground 1978-79	Total 1977-78	Total 1978-79
Research Universities (n = 8)								
Strong	25%	0%	75%	88%	0%	13%	100%	100%
Medium	0	0	0	0	0	0	0	0
Weak	0	0	0	0	0	0	0	0
Total	25	0	75	88	0	13	100	100
Doctorate-Granting Institutions (n = 8)								
Strong	13	13	63	63	0	0	75	75
Medium	0	0	13	13	13	13	25	25
Weak	0	0	0	0	0	0	0	0
Total	13	13	76	76	13	13	100	100
Comprehensive Universities and Colleges (n = 19)								
Strong	5	0	11	11	0	5	16	16
Medium	5	16	53	26	0	5	58	47
Weak	5	0	16	11	5	26	26	37
Total	16	16	79	47	5	37	100	100
Two-Year Colleges (n = 37)								
Strong	14	5	0	8	5	0	19	14
Medium	5	22	16	8	8	11	30	41
Weak	5	11	30	14	16	22	51	46
Total	24	38	46	30	30	32	100	100
All Types of Institutions Combined (n = 72)								
Strong	12	4	9	15	3	2	24	21
Medium	5	19	25	13	6	9	36	39
Weak	5	7	24	12	12	21	40	40
Total	21	30	57	39	21	32	100	100

with 4 percent in this favorable condition in 1978-79; and 12 percent of the institutions were weak and losing ground in 1977-78 and 21 percent in that unfavorable condition in 1978-79.

A perusal of table 39 reveals the following conclusions:

1. There is considerable variability among the institutions. Some currently strong institutions were gaining ground, some holding steady, and some losing ground; some currently weak institutions were gaining ground, and some holding steady, and some losing ground; some institutions of medium strength were gaining ground, some holding steady, and some losing ground.

2. There was considerable "churning" as institutions individually encountered particular setbacks and achieved particular gains. Changes in enrollments, appropriations, management, and other circumstances caused individual institutions to shift from one position to another in the table. Merely because an institution gets into the weak-losing ground category does not mean that it will remain there forever. Institutions, like families, take steps to overcome adversity. And merely because an institution gets into the strong-gaining ground category does not mean that it is secure forever. As in the business world of Chrysler and Penn-Central, prosperous organizations can fall on hard times.

3. From 1977-78 to 1978-79, some slippage occurred as fewer institutions were in the most-favored category of strong-gaining ground and more were in the category of weak-losing ground. Moreover, more institutions were gaining ground and at the same time more were losing ground, indicating a divergence with fewer in the stable middle.

4. All types of institutions shared in these trends except the doctorate-granting institutions. However, the comprehensive universities and colleges appeared to show the least satisfactory trends.

CHAPTER IX

SUMMARY AND CONCLUDING OBSERVATIONS

This report is the first in a series designed to provide timely and reliable information on the condition of the public sector of American higher education. The report is based on comprehensive information gathered from a sample of 135 public colleges and universities of which 95 participated. The sample is representative of all public accredited institutions except specialized schools such as free-standing law schools and music conservatories.

In this initial study, most of the data assembled cover the years 1976-77 to 1978-79, though some cover earlier years and also 1979-80. In later reports, the number of years covered will be extended.

Each chapter of this report contains a concluding summary statement. Hence this final chapter concentrates on overall interpretation of the findings.

Findings for the Public Sector as a Whole

Enrollment. The overall trend of full-time equivalent enrollment among public institutions was slightly upward over the years from 1976-77 to 1979-80. However, the pattern varied slightly among the several types of institutions. The two-year institutions gained considerably, the comprehensive institutions lost a little, and the research and doctorate-granting institutions held steady. The composition of the student bodies changed with an increase in the number of undergraduates and a decrease in the number of graduate students, and a relative increase in the number of part-time students. There was no significant change in the qualifications of the entering students and student attrition remained about steady. The institutions, especially the two-year colleges, would have liked to enroll more students, and they expect modest enrollment increases over the next several years. The enrollment situation could perhaps best be described as basically stable through 1979-80.

Faculty. The ratio of students to faculty held about steady except in the two-year colleges where enrollments increased more rapidly than faculty. Faculty compensation in the public sector probably advanced more rapidly than in the private sector. Nevertheless it failed to keep pace with inflation and by an even wider margin failed to keep up with the rising trend of average wages and salaries for the national labor force. The percentage of faculty on tenure, at about 64 percent, was higher than that in the private sector and the percentage may be rising slowly. Rates of

faculty turnover--new appointments and separations--were about stable. Faculty working conditions may have deteriorated a little as secretarial services and professional travel were curtailed and the load of student advising and committee work increased. Except for the relative decline in real compensation of faculty, and this is a critical exception, the faculty situation appears to have been fairly stable.

Other Staff. The number of administrative, clerical, and other supporting staff increased substantially. This growth may have been due in part at least to the accumulation of new institutional obligations such as affirmative action, new student services, occupational health and safety, provision for the handicapped, demands for reports to public agencies, etc. The pay of non-academic staff probably rose more rapidly than faculty compensation.

Educational Program. The most negative feature of the educational program was the inadequate secondary school preparation of the students. It is not clear whether this was getting worse, but there is no doubt that the situation continued to be a drag on the institutions by retarding educational progress and imposing extra costs for remedial studies. On the interests and achievements of college students, the reports from the institutions were mostly mixed, but were very definite in asserting that students are strongly oriented toward careers and practical studies and not keenly interested in liberal studies. The qualifications, competence, and performance of faculty were reported as holding steady or improving. There were few evidences of retrenchment of academic or other programs and many evidences of expansion or improvement of activities. However, over 40 percent of the presidents indicated that their institutions were losing ground financially--even though most said they were gaining ground in academic programs and student services.

Current Revenues and Expenditures. The analysis of operating revenues and expenditures suggests that the condition of many public institutions leaves much to be desired. When revenues are expressed per student in constant dollars (table 31), the research and doctorate-granting universities gained over the years 1976-77 to 1978-79, the comprehensive universities and colleges were down by 10 percent, and the two-year colleges sustained a 14 percent decline. The position of the two-year colleges may be due in part to the rapid shift in their funding sources from local to state government. The analysis of expenditures reveals that the growth (in current dollars) has been slower for instruction than for other functions. This reflects a shift of resources from the academic heartland to administrative and supportive purposes such as the purchase of energy and to new socially-mandated activities such as provision for the handicapped, occupational health and safety, multiple accountability, and many others. This decline in the percentage of expenditures going to instruction is doubtless an indicator of financial stringency. Altogether, our analysis of revenues and expenditures reveals very tight budgets, more so for the comprehensive and two-year institutions than for the research and doctorate-granting universities.

Liabilities. The amount of debt did not grow in proportion to inflation and the debt burden therefore declined. Short-term debt increased somewhat more than long-term debt. Much of the debt was incurred for the acquisition of auxiliary plant and is expected to be amortized through auxiliary revenues. Should a decline in enrollment occur or should student preferences for housing and dining change, there could be a decline in the income earmarked for amortization of debt. We are not necessarily predicting such an eventuality but only identifying a possible contingency.

Condition of Institutions Individually

The proportion of institutions that we judged to be "losing ground" increased from 2[illegible] to 32 percent in 1978-79. This is a disturbing development. However, some of the institutions that were losing ground were currently strong and some of the institutions that were currently weak were gaining ground. The more serious cases were those which were both currently weak and losing ground. These increased from 12 to 21 percent. These institutions were concentrated in the category of comprehensive universities and colleges. These results are disquieting. We would point out, however, that these estimates are based on limited data for a period of only one year. Moreover, there is a substantial element of judgment in placing institutions in various categories as to their current position and their trend. Nevertheless, these data are consistent with findings throughout the study to the effect that the public sector is not prospering. It may not be falling back precipitously, but it is almost certainly not gaining ground.

Findings by Types of Institutions

Throughout the report, we have tried to compare the several types of institutions to discover any differences among them in educational and financial condition. It is difficult to summarize these differences because they are not all in the same direction. At the risk of seeming to be more precise than the data permit, we offer table 40 which may help readers to discern the relative position of the several types of institutions.

Clearly, these figures are not consistent enough to permit a firm ranking of the three types of institutions according to educational and financial condition. Our judgment is that the two-year colleges show relative strength in enrollment and in educational progress, but weakness in finances; that the comprehensive institutions seem comparatively weak in enrollment, fairly strong in educational progress, and somewhat weak in finances; that the research and doctorate-granting universities exhibit the greatest all-round strength. However, on the whole, the data show neither disastrous deterioration nor spectacular progress, but rather fragile stability.

TABLE 40

RELATIVE POSITION IN EDUCATIONAL AND FINANCIAL CONDITION OF THE THREE TYPES OF INSTITUTIONS

	Research and Doctorate-Granting Universities	Comprehensive Universities and Colleges	Two-Year Colleges
Change in FTE enrollment 1976-77 to 1979-80	No change	Down 2 percent	Up 6 percent
Change in student-faculty ratio 1977-78 to 1979-80	No change	No change	Up 1.8 points
Change in faculty compensation in recent years	No substantial differences		
Percentage of faculty on tenure, 1979-80	No substantial differences		
Change in supporting services for faculty, 1978-79 to 1979-80	Mixed responses		
Increase in number of FTE administrative and general service staff, 1975-76 to 1979-80	3 percent	10 percent	17 percent
Increase in compensation of administrative and general service staff, 1979-80	7 to 8 percent	7 to 10 percent	7 to 9 percent
Presidents' assessments (trend consensus)			
Change in financial condition	-40	-55	-12
Change in academic condition	+47	+48	+45
Change in quality of student services	+13	+39	+39
Chief Academic Officers (trend consensus)			
Change in general academic achievement of students	+36	+ 9	+ 6
Change in general quality of faculty performance	+36	+23	+41
Change in rigor of academic standards	+43	+38	+32
Net revenue as percentage of total revenue	+ 5.3%[1]	- 2.9%	0
Increase in E & G revenues, 1976-77 to 1978-79	20 to 21%	17%	10%
Change in E & G revenues (constant dollars per student)	+ 7 to 8%	-10%	-14%
Change in indebtedness, 1974-75 to 1978-79	+16 to 21%	- 3%	-10%

[1]Refers to research universities only. Doctorate-granting universities had a deficit of -2.6 percent.

Some Uncounted Costs

An appraisal of the condition of higher education would be utterly incomplete without consideration of several elements of cost that are not ordinarily recognized in the accounts of colleges and universities and that are not included in our survey. There are at least four of these: deferred maintenance of physical assets, deferred maintenance of financial assets, deferred maintenance of human capital, and socially-imposed costs including the cost of energy. We shall consider each of these.

Deferred Maintenance of Physical Assets. There can be little doubt that the public institutions generally have been falling behind in the maintenance of their buildings, grounds, and equipment. In the best of times many campuses have sacrificed maintenance and replacement of physical assets to the improvement of salaries and other expenses related to the current delivery of educational services. In any year, prosperous or depressed, it is tempting for boards and administrators to postpone maintenance and for legislators to postpone funds for replacement of worn-out or obsolete assets. But in a depressed period, it becomes almost unavoidable to put off the maintenance of capital. American higher education has been through nearly a decade of financial stringency and the maintenance of physical assets has without doubt lagged. Buildings and equipment have been allowed to deteriorate, replacement of worn-out and obsolete capital has been postponed, library collections have not been kept up, and inventories have been allowed to run down. With few exceptions, no one knows the amount of the deferrals, not even the leaders of the institutions. There have been a few sporadic efforts to place dollar estimates on the amounts, but these have foundered because of the difficulty of establishing standards or benchmarks against which to measure the deferrals. But there is no disagreement on the proposition that the amounts are substantial, perhaps of the order of a whole year's operating budget.

One partial indication of the arrears is found in the statistics on capital outlays of colleges and universities for buildings, land, and major equipment. As shown in table 41, the capital outlays of public institutions (expressed in constant 1975-76 dollars) were running at about $5 billions a year in the late 1960s. The annual amount declined steadily in the 1970s to $3.5 billions in 1976-77. Since then, though precise figures are not available, the amount in constant dollars has declined still further--probably to around $2 billions as raging inflation has devoured the current dollars assigned to capital outlays.

Deferred Maintenance of Financial Assets. A less well-known form of deferred maintenance is the failure or inability to maintain financial assets. For example, many institutions have not been accumulating reserves and endowments and some have even been drawing down such funds. This has happened simply because inflation has steadily reduced the value of existing reserves and endowments, or because gifts that in more prosperous times would have been used to accumulate endowment and reserves have in depressed times been used for current operations.

Deferred Maintenance of Human Capital. We have pointed out repeatedly in the main text of this report that salaries and wages of faculty and other staff have not quite kept up with the cost of living and have fallen

TABLE 41

CAPITAL OUTLAYS OF INSTITUTIONS OF HIGHER EDUCATION
(000,000 omitted)

	Public		Private	
	Millions of Current Dollars	Millions of 1975-76 Dollars	Millions of Current Dollars	Millions of 1975-76 Dollars
1966-67	$ 2,573	$ 5,196	$ 1,370	$ 2,768
1967-68	2,732	5,236	1,443	2,766
1968-69	2,978	5,273	1,079	1,911
1969-70	3,066	5,076	1,266	2,096
1970-71	3,147	4,742	1,197	1,803
1971-72	3,156	4,283	1,180	1,601
1972-73	3,045	3,793	1,047	1,304
1973-74	3,276	3,767	1,164	1,338
1974-75	3,474	3,770	1,324	1,436
1975-76	3,619	3,619	1,508	1,508
1976-77	3,815	3,473	1,739	1,583

SOURCE: U.S. Department of Health, Education, and Welfare, National Center for Education Statistics, Projections of Education Statistics to 1985-86, Washington, D.C.: U.S. Government Printing Office, 1977, p. 82.

far behind the rise in compensation of workers in the economy generally. The burden of hard times in academe has been borne largely by faculty and staff. This has so far not led to a wholesale flight of personnel from higher education and it has not seriously affected the performance of faculty and staff--though it already has led to loss of morale and to a tendency on the part of the most talented and vigorous youth to seek out careers in business and the independent professions rather than in higher education. If the disparity between the trend of academic compensation and of pay in other industries continues and the gap widens, a time will come in the not too distant future when the quality of personnel available to higher education will decline disastrously and those remaining will be demoralized. The human capital in higher education--its most important capital--is in serious danger of deterioration.

Socially-Imposed Costs. A factor that has worsened the situation in the 1970s has been the rapid increase in costs imposed on higher education through informal social pressures and governmental mandate. Examples are the costs connected with occupational health and safety, provision for the handicapped, increasingly rigorous building codes, increasing employee fringe benefits, collective bargaining, affirmative action, women's athletics, environmental requirements, demands for innumerable statistical reports, broadened participation in internal decision-making, and dozens of others. The objectives of most of these socially imposed costs have been laudable but they all have entailed new expenditures. Estimates of the amount are not very reliable but in the aggregate are considerable. Had funding sources increased revenues to meet these costs, they would not have been a problem but an opportunity. But to the extent that funds have not been increased for these purposes, as has often been the case, the effect has been to force rearrangement of internal budgets to absorb the socially imposed costs. They have had the effect of reducing funds available for regular operations. A special case of socially-imposed cost--this time imposed by OPEC--is the rise in prices of energy. The effect, as with the other socially-imposed costs (to the extent that they are not provided for by the funding sources) is to shift resources away from normal educational activities.

Summary. Throughout this study, we have indicated that times are tough but that the institutions have been able to hold things together so that educational programs have not been harmed seriously and retrenchment has not been severe. In this section, we are pointing out that the basic stability of the public institutions has been achieved at the expense of physical, financial, and human capital and through changes in budgetary priorities. If trends of the last decade continue on indefinitely, a time will come when educational performance will deteriorate. That the public system of higher education has held reasonably steady has been possible only because important costs have been deferred to the future. The amount of these costs is not known. What is known is that they are large.